THE *Philosophical Review*

A QUARTERLY JOURNAL

APRIL 1950

CORNELL UNIVERSITY PRESS, ITHACA, NEW YORK

$6.00 A YEAR, SINGLE COPIES $1.50

THE
Philosophical Review

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THE

Philosophical Review

VOLUME LIX * NUMBER 2 * WHOLE NUMBER 350

April 1950

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EDITED BY THE FACULTY OF THE SAGE SCHOOL OF PHILOSOPHY IN CORNELL UNIVERSITY. PUBLISHED BY CORNELL UNIVERSITY PRESS, ITHACA, N. Y.

Entered as second-class matter at the post office at Ithaca, New York, under the act of March 3, 1879. Additional entry at Geneva, New York.

NECESSITY AND PERSUASION IN PLATO'S *TIMAEUS*[1]

The generation of this cosmos came about through a combination of necessity and intelligence, the two commingled. Intelligence, controlling necessity, persuaded her to lead towards the best the greater part of the things coming into being; and in this way this universe was constructed from the beginning, through necessity yielding to intelligent persuasion.—*Timaeus* (48a).

THIS passage is generally recognized as asserting something of central importance in Plato's cosmology. But precisely what it intends to assert is not at first sight clear. The language is suggestive of mythology, with its latent personification of Ananke, Peitho, and Nous. We are told at the beginning of Timaeus' discourse that the story of creation is a myth. Perhaps, then, this passage is merely a poetical reference to a problem that needs to be solved, rather than the statement of a solution. For if we take it literally it presents a paradox. What has persuasion to do with the processes of nature? And what kind of necessity is this that can be persuaded? I believe, however, that these difficulties largely disappear and a clear-cut doctrine emerges from this passage when it is understood in the light of the problem with which Plato is confronted in the *Timaeus*.

Any conception of the cosmos that makes teleology fundamental, as Plato's does, has to meet two somewhat different types of criticism. There are difficulties of faith, and again there are logical difficulties. Plato, as we know, thinks of this cosmos as "the fairest of creations." It is for him a living, intelligent being, consciously imitating in space and time the divine and supersensible world of Ideas. Being a creature in space and time, it cannot, of course, be a perfect imitation of the supersensible pattern; nevertheless it exhibits its likeness to that pattern in the orderliness of the celestial movements and in the mathematical perfection of its spherical form. These regular celestial circuits are a "moving image" of that eternity that characterizes true being.

[1] Read before a meeting of the Fullerton Club, in Bryn Mawr, October 8, 1949.

Likewise the lesser parts of this visible cosmos, including man, are fashioned "with a view to the best." Man is endowed with an intelligent soul, akin to the soul of the cosmos. Man's soul is lodged in a bodily frame that exposes him to innumerable distractions and passions, yet still provides means to facilitate the victory of intelligence over disorder. Thus the organs of vision are given to man that he may behold the courses of the heavens and so attain to philosophy, "than which no greater gift has been or could be conferred by God upon the mortal race." Speech and hearing have similar ends; they serve as allies of reason against the disorder within and without us, so that we may be able to imitate the divine craftsman by bringing into order and harmony that portion of the visible world that is under our control.

These are some of the more important elements of what I should call Plato's cosmic faith. The *Timaeus* is an impressive record of this faith; it is, as Shorey has said, "the chief source of cosmic emotion in European literature."[2] And its appeal is little affected, for those to whom it does appeal, by the change from the finite spherical universe of the ancients to the still finite but unbounded and perhaps expanding universe of modern physics. It would seem, however, rather futile to argue much with those to whom it does not appeal. Final convictions on such matters depend so much on conceptions of value and on ultimate attitudes towards the world — whether of trust or mistrust, of loyalty or defiance — that probably no parade of empirical evidence will ever be adequate to justify the belief of those who believe or overcome the objections of those who doubt.

But there is another kind of problem raised by the *Timaeus* which is both more fundamental and more susceptible of philosophical argument. Plato thinks of this cosmos as the product of intelligent design. Now if intelligent design is a genuine cause of natural processes, how are we to formulate its relation to the other causes involved in these processes? Nature, as her picture is being drawn for us by modern science in increasing fullness of detail, is a texture of events, each of which is determined by antecedent events, or at least follows upon antecedent events in accordance with causal laws that have a high degree of statistical reliability. This picture of nature affords no little satisfaction to our minds; it is intelligible. If a designing intelligence is also involved in all this or in any part of it, we should be able to fit

[2] *Platonism Ancient and Modern*, p. 92.

its operations into the picture without destroying the intelligibility of the whole. The problem, to state it pointedly, is how to make the working of intelligence intelligible. The difficulty of this problem, as well as its importance, is well attested by the numerous attempts to solve it in modern philosophy and by the lack of any assured and accepted solution. This, I believe, more than any absence of cosmic emotion or cosmic faith, is the real reason why philosophers and scientists today are reluctant to make commitments to teleology. Whatever may be our beliefs about the beneficence of the world order, we can have no clear title to them if we cannot show that design is at least thinkable alongside of causal sequence.

And it should be remembered that this problem concerns more than the validity of our beliefs about the presence or absence of *cosmic* purpose. By the same argument we are not entitled to believe in the efficacy of purpose in any part of the natural order unless we can show that purposive activity is thinkable. When the tailor makes me a suit of clothes or the mechanic repairs my automobile, I cannot really say that there is any purpose, or intelligent design, in these activities until I have shown, at least to my own satisfaction, how intelligent design *can* enter into events. Conversely, if we can form an intelligible picture of the working of purpose in these familiar spheres of design, then cosmic teleology cannot be ruled out, as it sometimes is, merely on the ground that purpose is incompatible with the causal order. We all do in fact believe that intelligent design occurs, at least in human affairs. An age that is addicted, as ours is, to thoughts of "planning" cannot be described as committed to a nonteleological version of nature — for man, we also believe, is a part of nature. There is a pathetic confusion in contemporary thought. We talk confidently about a "design for living," a "planned economy," and "social engineering," while our theories of nature and human nature are steadily making less conceivable the control by intelligence which these visions presuppose.

But this confusion is not a peculiarly modern phenomenon. A similar dilemma confronted Plato's contemporaries, and it is Plato's appreciation of this dilemma that underlies his cosmology in the *Timaeus* and gives point to the solution at which he arrives. The succession of pre-Platonic cosmologists, from Thales to Democritus, has been described, not unfairly, as exhibiting a steady development from "animism" to "mechanism." The interest in the mechanics of nature was by no

means universal among these thinkers, nor was the conception of mechanism always clear to those for whom it was the predominant concern. Yet it does receive clear formulation and exclusive importance in the latest of these pre-Platonic cosmologies, that of Leucippus and Democritus. The atomic theory which they set forth pictures the cosmos as the necessary and undesigned result of the collisions of eternally moving particles of solid being. In this world everything happens "of necessity," as Democritus says, and all purpose is excluded. Now Democritus also constructed an ethical system, which so far as we can understand it has very little connection with his physics. He advises us to moderate our desires, to choose the pleasures that lead to cheerfulness, and to follow a number of other precepts that credit us with a degree of freedom and intelligent self-control that his physics would rule out. Democritus, we see, exhibits the same order of confusion that may be found in almost any well-bred scientist of today.

If we require evidence that Plato saw this confusion, we need only turn to the well-known passage in the *Phaedo* (96a–99c) where Socrates gives an account of his early interest in these "inquiries into nature" and expresses his eventual dissatisfaction with them because they took no account of the "good." This passage contains most of the principles that Plato was later to use in the *Timaeus*, and therefore it is well to state them systematically. First there is the distinction (99b) between the "real cause" (*τὸ αἴτιον τῷ ὄντι*) and the conditions or factors "without which the cause would not be a cause" (*ἐκεῖνο ἄνευ οὗ τὸ αἴτιον οὐκ ἄν ποτε εἴη αἴτιον*). For example, Socrates' bones and muscles are necessary conditions, but not the true cause, of his conduct during those last days; the true cause is the fact that he deemed it "better" to remain and drink the hemlock (98e). Secondly, there is the recognition that an explanation in terms of necessary conditions is true and important, though not adequate. "If you say," says Socrates, "that without these things, i.e. bones and muscles and the like, I would not be able to do what seemed best to me, you would be speaking the truth" (99a). In other words, these secondary causes are necessary; and it is implied that a knowledge of them would often be a good thing to have. Thirdly, there is the emphatic analogy between explaining Socrates' actions and explaining the cosmos. Just as bones and muscles are insufficient to account fully for Socrates' being in prison, so also in cosmology we need more

than the "vortex" (δίνη) of Anaxagoras (99bc). In the one case as in the other, it is necessary to take account of the good if we would fully understand. And lastly, there is the pregnant assertion with which the passage closes—that the good operates by "binding things together" (99c)—a phrase which will become clear from the *Timaeus*.

The distinction made in the *Phaedo* between the true cause and the conditions without which it could not operate becomes in the *Timaeus* a distinction between two kinds of causes. The true cause, sometimes called the divine or intelligent cause, is an agency working for the best. This agency is described as a craftsman (δημιουργός)—a designation that has often been regarded as primarily poetical or mythical, but which, as will be shown, has a very literal meaning. But like any other craftsman, the cosmic demiurge uses materials; and these materials and their natures are obviously an important factor in determining what kind of product he can fashion from them. They also are causes, but in a secondary sense—συναίτια, "auxiliary causes" they are designated in the *Timaeus* (46cd).[8] "We must deal with both kinds of causes," says Timaeus, "on the one hand, those that are intelligent artificers of the good and beautiful, and on the other hand those that without intelligence produce in every case disordered and chance effects" (46e).

This is the program of inquiry which Timaeus actually follows and in a manner so emphatic as to show itself in the very structure of the dialogue. In the first part of his discourse, Timaeus is primarily concerned with the operations and intentions of the demiurge. He discusses why the creator created a world at all, why he made it one and spherical and endowed it with a soul guided by intelligence. Then he describes the operations of this world soul and the mathematical proportions that give it its character. Then follows an account of the generation of man and of the benevolent intentions of the demiurge manifested in man's bodily frame and in the harmonious proportions of his soul. So far the materials on which the creator works have been taken for granted, without analysis. Only at the end of this section, in the discussion of vision and the bodily mechanism through which it takes place, do the secondary or auxiliary causes begin to receive attention. At this point (48a) Timaeus breaks the course of his exposition and makes what he calls a "new begin-

[8] Cf. also 68e, 76d.

ning," in order to take account "of the nature of fire, and water, and air, and earth, such as they were prior to the creation of the heaven." These are, of course, the primary bodies out of which Plato's predecessors had constructed their worlds. Whether they are really primary or not remains to be seen; but Plato accepts them provisionally and attributes to them certain inherent qualities or powers (δυνάμεις), as his predecessors had done. These materials and their inherent powers are the auxiliary causes with which the demiurge works and whose co-operation with him he has to effect. They constitute what Plato calls "necessity" or "the things that occur of necessity" (τὰ δι' ἀνάγκης, 47e). Finally, after the analysis of these primary materials is completed, comes the third part of the dialogue (69–92), in which Timaeus brings together the auxiliary and the intelligent causes and shows how they co-operate, the former in the service of the latter, to produce the more complex structures in nature, particularly the human body.

Let us now see how Plato conceives of these materials and their powers and how they operate when not under the influence of intelligence. To one who knows the speculations of Plato's predecessors, it is a familiar world that presents itself to the demiurge when he begins his ordering activity. It is a world of powers in unstable equilibrium and in continuous motion, a world of things being pushed by others and being compelled, since there is no void, to push others in turn. We find the four traditional primary bodies — earth, air, fire, and water — and the familiar "opposites" of pre-Socratic thought — the wet and the dry, the hot and the cold, the dense and the rare. As a result of the continuous motion, the dense and heavy things tend to become segregated from the rare and lighter things. More particularly, each of the primary bodies has a tendency to move, or be thrust, towards its kindred element. Aggregates in turn are dissolved through the working of the powers thus brought into play against one another. There is indeed one factor of considerable novelty in Plato's account. He advances a theory that the differences between the four primary bodies are due to differences of geometrical configuration. If this be true, the ultimate elements are not the four primary bodies, but the triangular plane surfaces of which they are composed. This theory enables Plato to explain the apparent transformation of air, fire, and water into one another; and this transformation in turn explains why it is that all the air and all the water and all the fire and all the earth are not segre-

gated into four separate regions of space, as would naturally result from the forces hitherto mentioned.

These are the materials and powers that constitute what Plato calls the "works of necessity." What is the meaning of this designation? The term necessity was chosen, so it seems, because that is the name of the cause which Plato's predecessors — in particular Leucippus and Democritus — had found here. But it was not simply a convenient, because familiar, designation. For Plato also this world of earth, air, fire, and water in perpetual motion and interchange was a realm of genuine necessity, as Democritus understood the term; it was a world in which effects follow regularly upon certain known forces at work. Given *A*, then we can expect *B*. The attempt has been made[4] to show that what Plato meant by necessity here was that special sense of the term which Aristotle calls "hypothetical necessity." For example, if a saw is to cut, it must be made of iron. If *B* is to occur, we must have *A* first. According to this interpretation, the necessity that characterizes this world before intelligence comes into play is simply its necessity as a means to the ends that intelligence would produce. Now there is no doubt that Plato did think of these materials and forces as necessary means for the realization of the creator's intentions. But this cannot be all that he meant. What this interpretation overlooks is that definite dependable structure and behavior must be a characteristic of these means if they are to be usable for the creator's ends. It is the presence of these dependable natures and the regularity of the effects they produce upon one another that Plato means by necessity.

The proof that Plato means this is the thoroughness with which he analyzes these powers and their effects. From page 48 to the end of the dialogue, the greater part of the *Timaeus* is concerned with the analysis of these "works of necessity," in all sorts of combinations. Indeed one reason for the greatness of the *Timaeus*, as compared with most idealistic cosmologies, is the seriousness and thoroughness with which Plato treats of the auxiliary causes. He shows how they produce the motions of the primary bodies and the transformations of these

[4] Baeumker, *Das Problem der Materie in der griechischen Philosophie*, pp. 115–126 (cf. especially pp. 120–121). This discussion is cited with approval by Taylor, *Commentary on Plato's Timaeus*, p. 303. Other discussions of Plato's "necessity" will be found in Cornford, *Plato's Cosmology*, pp. 161–177; and in Rivaud's edition of the *Timaeus*, pp. 64–65. Of these various views, that of Cornford comes nearest to the interpretation advanced in this paper.

bodies into one another; and how they give rise to the variety of fluids, metals, and other earthen materials. He traces their operation in the phenomena of melting and cooling, of freezing and thawing, in the production of the qualities of hot and cold, heavy and light, as well as tastes, odors, sounds, colors, and the feelings of pleasure and pain. He shows how they are involved in the structure of the human body, with its bone, marrow, flesh, and sinews. Through them he explains the mechanism of respiration, the movement of the blood and other body fluids, and the various diseases that afflict the human frame. Crude as these explanations often are, when compared with the more refined natural science of our time, there is an unmistakable quest for precision in Plato's procedure. In dealing with these natural processes, whether they occur with or without the guidance of intelligence, he tries to picture as clearly as possible the particular way in which the operating powers produce, or could be conceived as producing, the observed effects. In short, the world on which the creator sets to work is characterized by necessity in the sense that specific effects follow regularly from specific causes. It is because this is true that the creator can use these works of necessity for his purposes.

But how does the intelligent cause use the works of necessity to accomplish his purposes? Here we must come to terms with the metaphor of the craftsman. This is indeed a metaphor, and a bold one, when applied to cosmic design. But it ceases to be a metaphor when we recall that intelligent design has its humbler manifestations. The fundamental philosophical problem, as was insisted upon earlier, is to explain the relation of intelligent purpose to the causal order; and the activity of any craftsman, in the literal sense of the term, is just such an instance of what we are in the habit of calling intelligent design. Plato's statement of the case, then, springs from universal and familiar human experience in guiding the works of necessity to an end we regard as good. How can this experience be made intelligible? If we can show that craftsmanship is possible anywhere, in however humble and limited a measure, we have removed what is probably the main philosophical obstacle to the assumption of cosmic purpose.

Remembering then that the demiurge is not merely a cosmic metaphor, but the simple description of a prima facie fact, let us repeat our question. How does intelligence enter into the stream of events? Plato's

answer is that intelligence "persuaded" necessity.[5] This looks like another metaphor and at first sight a very inapt one. It appears to go haltingly, if at all, with the idea of craftsmanship, which is certainly fundamental. But let us see. Persuasion is of course contrasted with compulsion.[6] Every competent craftsman knows that he cannot force his materials to take on forms or perform functions that go against their nature. But an intelligent craftsman makes no attempt to do the impossible. What he does is to select among the materials available those best adapted to his purpose; and these he handles with discrimination, utilizing certain of their powers, while ignoring or subordinating the others. When he has to use materials with undesirable properties, he may introduce other materials with opposite powers to counteract the unwanted ones. It may be objected that there is, nevertheless, compulsion. Does not the carpenter use force when he saws wood into appropriate lengths or hammers boards together with pegs? This is true; but to see the situation correctly we must extend the scope of our analysis. When sawing or hammering, the carpenter uses tools with definite powers. These tools he cannot force; he has to rely upon the severing power of sharpened steel, the flattening and impelling power of the hammer head. He is bringing one set of powers into play against others. But, we may ask again, what about the motion of the saw and the hammer? Here the carpenter is using still other powers distinct from intelligence, this time the powers of his own body — his arms and hands and their intricate leverages moved by muscular contractions. This is another set of powers resident in the materials at his disposal and brought into the context of the event. The result — the mast or the spear shaft — is the product of intelligence, but certainly not of any constraint by intelligence. Rather, it comes about easily and naturally from the co-operation of all these forces, each of which produces the effects that could be expected from the nature it has. So much at least is suggested by the metaphor of persuasion.

But persuasion is a term that suggests rhetoric, and we know that in the *Gorgias* Plato was severely critical of the so-called art of persuasion cultivated by the sophists and politicians of his day. He says, in fact,

[5] Besides the passage quoted at the beginning of this paper, cf. also 56c, 75b.

[6] This and the following paragraph are an expanded version of an interpretation advanced in my introduction to the edition of the *Timaeus* recently published by the Liberal Arts Press. Certain sentences and phrases are reprinted here with the permission of the publisher.

that it is not an art at all, but a mere sham, fundamentally immoral in its effects. But this was not his final word on the subject. In a later dialogue, the *Phaedrus,* he himself sets forth the principles of a genuine art of persuasion, as distinguished from the insincere and superficial "art" expounded in the usual manuals of rhetoric. Two things the orator must have, Plato says, if he is to be a master of his art. He must know the good, the end he wishes to accomplish; and secondly, he must know the souls of his hearers, so as to appeal effectively to their particular interests and purposes. Rhetoric is psychagogy, the art of leading souls. There follows (270d–272b) a discussion of the types of souls, of how necessary it is for the orator to be able to distinguish these types and to know what kind of arguments to use for each, and when and on what occasion to use each of these arguments. When a man knows all this, then, and not till then, is he a master of the art of persuasion. Is there not more than an analogy between this art of psychagogy and the procedure of the intelligent craftsman in dealing with his materials? As the latter must know his wood and stone and metal tools if he wishes to use them intelligently for his ends, so the orator must know his human auditors, so as to employ effectively the motives in them to further the purpose he wishes to see realized. Persuasion, in its broadest sense, is the technique of intelligence. It is the proper means for accomplishing what we will with others — whether inanimate materials or thinking men — by understanding them so thoroughly that we can use the forces inherent in them to bring about the end we desire.

To say, then, that the cosmos comes about by persuasion means that it results from the working of the powers inherent in the materials of which it consists, each of them bringing into being the effects natural to itself, and none of them being under any constraint by a power outside nature. Nowhere within the series of events will we find any place where intelligence operates as a *deus ex machina* to subvert the natural sequence or replace the natural powers by powers or agencies of a different sort. There are stresses and conflicts within the system of nature, where one natural force is met and counteracted by another natural force; but there will not be conflicts between nature and intelligence. Precisely because the world has come about in this fashion, it is easy to assume that intelligence is not a factor, just as the work of art produced by a master seems to spring from the very nature of the

material, and just as the playing of a well-coached team appears to be but the inevitable result of the spontaneous powers of the several players.

Where, then, is the role of intelligence? The answer is already obvious, and I believe it is the answer that Plato clearly indicates. Intelligence is responsible, not for the specific effects of any given power or set of powers, but for bringing together these specific powers into such juxtapositions and collocations that their joint natural effects are good, or at least better than would have been the isolated effects of the powers working in separation from one another. As our account of the carpenter shows, what the craftsman does is to bring together into the context of one event a variety of powers that would, in isolation, produce unrelated and irrelevant effects; but together they produce, with equal necessity, an object that expresses his purpose. If this is the way intelligence works in the region of everyday craftsmanship, there is no call to imagine a cosmic intelligence, if there be any, as operating in any different fashion.

Let us see whether this interpretation fits what Plato says elsewhere about the working of intelligence. He frequently describes the activity of the intelligent cause as bringing about order in what was before a disordered world. "Finding the whole visible world . . . moving in an irregular and disorderly fashion, out of disorder he brought order" (30a).[7] This language seems strange when we remember that these materials and their powers are also called the works of necessity. But there can be no doubt that Plato means this realm of necessity is also, in a certain sense, the realm of disorder. Necessity is called "the wandering cause" (ἡ πλανωμένη αἰτία, 48a); it "produces chance effects without order" (46e). Yet it is clearly not Plato's idea that this world of materials and powers is chaos, a bedlam in which anything could follow from anything else. This interpretation is excluded, as I have argued above, by the very thoroughness with which Plato has treated of these various powers and their effects. Furthermore, no intelligence that we know of could operate upon such materials, of which nothing had any determinate and reliable character, and no predictions of any sort could be depended upon. We must allow for the imperfections of human knowledge, of which Plato is well aware; but, with this reservation, he is evidently saying

[7] Cf. also 69bc.

that effects follow regularly from observed causes and that expectations based upon such observed sequences are reliable. The reason why this world on which the creator works is called disorderly is not that it lacks causal connections, but that it also exhibits chance (τύχη). The causes at work in it, "being devoid of intelligence, produce chance effects, without order" (46e). There is a parallel passage in the tenth book of the *Laws*, where Plato is describing the materialist cosmologies of his predecessors; and here we find the same emphasis upon chance as a feature of the materialists' necessity. The primary bodies are moved by "the chance of their several powers"; and all other things are mixtures of these bodies, resulting "by chance, and of necessity" (κατὰ τύχην ἐξ ἀνάγκης) from the coming together of opposite forces (889b). It is clear that for Plato both chance and necessity characterize the world prior to the entry of the intelligent cause.

What did Plato understand by chance? He gives us no analysis of this term; but Aristotle analyzed it in the second book of his *Physics*, and his analysis may help us to an understanding of Plato's views. The *Physics* is one of Aristotle's earlier works; and this part of it was written, in all probability, before Aristotle left the Academy. Furthermore there is no hint in this analysis that he is combating Plato or the Platonists. His analysis is evidently directed against popular thought, which tended to make chance a cause of events, and also against Democritus and Empedocles, who assumed that purposive sequences could be explained without teleology, i.e., by chance. Aristotle's analysis may be summarized as follows. There are some sequences that are invariable, and other sequences that hold "for the most part." These two types of sequences are the only ones that can be the subject matter of scientific inquiry; hence chance is excluded as a cause. What then is it? Suppose we have two regular sequences: *A* followed always or usually by *B*, and *C* followed always or usually by *D*, and suppose that on a particular occasion they occur together. Suppose also that this simultaneous occurrence of *B* and *D* is something that serves a purpose and might have been the product of more or less conscious design. This conjunction of *B* and *D*, each the result of its own independent cause, is what constitutes chance.

This analysis shows clearly how Plato could think of both chance and necessity as characters of the world on which the creator works.

Necessity is represented by the causal sequences; chance, by the intersection or conjunction of these causal sequences. Aristotle is inclined to use the word τύχη to denote only those conjunctions of effects that are positively desirable or undesirable, just as we use the word luck, or fortune, to mean primarily good luck or bad luck. But the numberless conjunctions that escape our attention, because they neither aid nor hinder us in our purposes, are also examples of chance. Plato's references to the world of necessity suggest this broader conception of chance as any collocation of caused effects, whether relevant to an end or not. The world of necessity is a world of regular causal sequences, a world in which determinate effects follow regularly from specific causes, but a world in which the joint results of these causes are unplanned. What happens when intelligence enters is that certain sequences which we have no reason to regard as necessarily connected with one another do as a matter of fact occur together, and occur together habitually, producing jointly effects which could not have been expected or predicted from any of the individual sequences, but only from their collective occurrence. These joint results are the work of intelligence, and the production of these results is what constitutes the "ordering" that Nous brings about. Thus to understand the actual world of becoming we need to know not merely the reasons for the effects produced in the several causal lines, but also the reason for the "convergence"—as we may call it—of these separate lines. The reason for this convergence is the good of the effect produced. Of such an event constituted by converging causal lines, it is quite literally true to say, as Plato had said in the *Phaedo*, that it is the good that "binds things together," since it is the good that provides the ground for the conjunction of otherwise independent causal sequences.

Such, it would seem, is Plato's conception of the relation of the ordering intelligence to necessity. I have cast it in somewhat modern terminology in order to indicate its relevance to contemporary issues, though without, as I believe, doing violence to Plato's thought. If this be his conception, then the order brought about by intelligence is not a subversion or contravention of the works of necessity. The actual world of concrete becoming is, so to speak, the result of a selection, from among the various possible collocations of causes, of those particular collocations which will most readily serve his purposes. The actual

world is only one of many possible worlds, any one of which might have come about by a variation in the modes of co-operation of the works of necessity — just as the spear shaft made by the carpenter is only one of the possible objects that could have resulted from the co-operation of his muscles, his tools, and the wood on which they exert their effects. In none of these possible collocations would there be involved any suspension of causal connections. The actual world is a product of necessity, as Plato says, but of necessity "yielding to intelligent persuasion."

Is this an intelligible account? It will perhaps be objected that the convergence of these causal lines cannot occur without some contravention of the causal sequences present in the works of necessity. It will be said that to bring them together into the context of one event is to violate their pre-existent order and mode of operation; and if this is true, the ordering brought about by intelligence is after all a violation of necessity. Let us note precisely what this objection presupposes. It rests on the assumption that the order and arrangement of these primordial forces at any given moment is so related to all other events in the universe that, given the state of affairs at that moment, there is at any other moment of time, whether past or future, only one state of affairs compatible with the given state. This assumption in effect denies that there are independent lines of causation. From the state of the world at any given time, a truly penetrating intelligence could predict, not merely the effect of cause A under determinate circumstances and the effect of cause B under determinate circumstances, but also the future collocations of A and B (or more precisely, collocations of empirical instances of A and B) and the effects of these collocations. In short, the whole future of the world is necessitated in the present forces and their present arrangements. If this is the character of the world on which intelligence operates, then obviously the ordering activity Plato describes as the work of intelligence is ruled out.

This assumption has appealed strongly to both scientists and philosophers in modern times. It would be difficult, however, if not impossible, to show that it is a necessary assumption. It can hardly be regarded as a necessary a priori principle, nor again does it seem required as a working principle of scientific inquiry. For Plato, it was not necessary in any sense; on the contrary, it is an assumption incompatible with his basic distinction between the sense world and the intelligible world.

To assume that all the events of the cosmos, through all its becoming in time, could be inferred from a temporal cross section would be to ignore both the particularity of things and events and the element of becoming. A world deducible in all its parts from a portion of itself is a world of universals, not particulars — a timeless world, not one in process. Plato believes that the sense world imitates such a timeless world, but is not itself such a world; it is a world in which contingency and real possibility are not only present but inevitably present. In thus regarding strict necessity as a relation, not between things but between ideas, and in insisting on the distinction between the intelligible world and the world of facts and events, Plato really seems to be nearer to us than the nineteenth-century determinists. He at least would understand fully Hume's momentous distinction between matters of fact and relations of ideas, as they apparently did not.

Let us return to persuasion. I have tried to show that Plato's use of this term to describe the ordering activity of intelligence is an apt characterization of the way in which a planned world, as he believes this to be, could be brought about through the works of necessity. It implies that the plan realized in the world process is not one imposed from without, but one that is elicited from the materials involved. It implies just that insight into ends, that understanding of materials, and that manipulation of necessities that characterize genuine craftsmanship. And I have tried to show just what kind of necessity it is that can thus be subject to persuasion. Besides this, there are certain overtones in the term that add to the richness of its significance and throw further light on Plato's cosmology. Persuasion is a slower, but much surer, process than compulsion. Plato's view has been presented, for the sake of simplicity, as if it might imply a single act of intelligent persuasion, effecting a cosmos at one stroke; but the generation of the cosmos is obviously a more prolonged process than this. What we have in the *Timaeus* story is a sequence of ordering acts, beginning with the initial ordering of the four primary bodies, whereby they took on, "so far as they could be persuaded" (56c), geometrical shapes that would facilitate their transformation into one another, and continuing on to the ordering acts that produce the most complex of organic structures. Now if each of these acts of the creator represents, as I have said, a selection from among the possibilities open to him, we can see that every act of persuasion inevitably reduces the range of future choices.

while rendering more secure the basis for future persuasion within the range of possibilities left open. For example, of the multitude of triangles open to his choice, the creator selected two — the halved equilateral triangle and the isosceles right triangle — to be the surfaces of bodies. Once the primal materials have been persuaded to take on these forms, they are henceforth limited in their movements and possible combinations by these acquired shapes. At the same time their behavior, so to speak, becomes more reliable; and the creator is able to direct his persuasion toward more complicated forms of co-operation. Thus the genesis of the world is the story of successive acts of persuasion, whereby the "things coming into being" at each step are "led towards the best," so far as possible, and furnish in turn new possibilities of further acts of intelligent persuasion.

There is also, Plato suggests at several points in the *Timaeus*, an intrinsic good realized by persuasion, a good distinct from the end which the collocation of forces brings about. Persuasion is a process of eliciting co-operation among powers and forces that were previously indifferent, if not hostile, to one another. The creator makes them "friends" (32c, 88e) and thus produces, not merely a more stable foundation for higher ends, but also an intrinsic good, the kind of good that is essential to any community. The *Timaeus*, we should remember, was intended to be the first of a trilogy of dialogues; and the two later ones were to deal with human history and politics. The problem of the statesman is essentially a problem of bringing about order and co-operation among his human materials; and he will succeed, Plato tells us repeatedly in the *Laws*, only if he uses persuasion. The divine craftsman therefore sets the example and provides the setting for the activity of the intelligent statesman, by bringing into being a cosmos built upon the friendly co-operation of its varied parts.

Finally, commentators on the *Timaeus* have often wondered about the source of the disorderly motions that prevail before intelligence begins its work. It seems to be a cardinal point in Plato's later philosophy that all motion has its source in soul. The soul is the self-moving, the source of motion, the ἀρχὴ κινήσεως: this is the definition given in the *Phaedrus* and reiterated in the *Laws*. We do not find this doctrine stated in the *Timaeus*, though we are told that soul is present throughout the cosmos, not merely in man and in the celestial bodies, but also as an all-embracing world soul. Furthermore, Plato explicitly

distinguishes between intelligent soul and soul devoid of intelligence, and says that irrational soul came into being first. The natural inference is that the disorderly motions upon which intelligence works are due to the irrational parts of the world soul. If this is Plato's intent, then intelligence, in its demiurgic function, is dealing with motions and forces that spring ultimately from soul; and it employs, therefore, the only means of producing a permanent and beneficent effect upon a soul, viz., persuasion. The craft of the demiurge is after all the art of psychagogy.

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RADICAL EMPIRICISM AND PERCEPTUAL RELATIVITY. I

AMONG the many forms of ontological monism which have been proposed or defended during the past fifty years, there are a number of theories which affirm a proposition which we may call "the thesis of radical empiricism." The thesis of radical empiricism, when limited to the ontology of the physical world, is the proposition that the meaning of any statement about the physical world can be expressed, at least in theory, by a conjunction of other statements which refer only to sense-data (sensible appearances).[1] If we stipulate that this use of the term "sense-data" is not supposed to commit a philosopher to any particular view about the phenomenology of sensible appearances and if we do not put any restrictions on the logical form of the statements which may be used to refer to sense-data, it is evident that the thesis of radical empiricism is compatible with theories ranging all the way from extreme forms of subjectivism to the interesting and original form of objectivism which has been defended by C. I. Lewis in his recent book, *An Analysis of Knowledge and Valuation*.[2] Since the thesis of radical empiricism must be consciously accepted or rejected in formulating a general theory of meaning, since it must be consciously accepted or rejected in the construction of an adequate ontology, and since it has epistemological implications so important that no treatise on the theory of empirical knowledge can avoid discussing them, it is probably no exaggeration to say that this thesis has received much more attention during the past fifty years than any alternative thesis about the meaning of physical statements. And yet, as shown by

[1] This use of the term "radical empiricism" differs somewhat from that of William James. Cf. James, *The Meaning of Truth* (New York: Longmans Green & Co., 1910), pp. xi–xiv.

[2] La Salle, Illinois: Open Court, 1946. Lewis' position, like the one which is now commonly called "phenomenalism," is *objectivistic* or *realistic* in the sense that it proposes an analysis of physical statements which does not make physical objects dependent for their existence on being experienced (*vide* pp. 229 and 230 of Lewis' book).

the recent publications of reputable philosophers, there is quite probably as much disagreement as ever concerning its validity.

In recent years, however, there has gradually emerged a very powerful argument which seems to some philosophers to be capable of refuting the thesis of radical empiricism decisively; it is this argument which I call "the Argument from Perceptual Relativity" and which I propose to examine in this paper. The importance of the Argument from Perceptual Relativity has recently been demonstrated by Lewis' discussion of "terminating judgments" in *An Analysis of Knowledge and Valuation* and, more specifically, by R. M. Chisholm's subsequent criticism of Lewis' conclusions and Lewis' reply to that criticism.[3] Chisholm suggests, in fact, that the validity of empiricism in general is challenged by the Argument from Perceptual Relativity; and Lewis believes that knowledge is impossible if this argument cannot be refuted. Whether or not these are correct appraisals of the importance of the argument will depend, of course, on how strictly such terms as "empiricism" and "knowledge" are defined. But there can be no doubt that the argument is crucial for every philosophical theory which affirms the proposition which I have called "the thesis of radical empiricism"; and, in view of the place that such theories have occupied in the philosophy of the past fifty years, it is clear that the argument deserves more attention than it has so far received.

The following discussion of the Argument from Perceptual Relativity is divided into three parts. In Section I, I have formulated the argument and I have stated the requirements which must be met by any convincing attempt to refute it. In Section II, I have examined Lewis' proposed answer to the argument and I have given some reasons for believing that this answer is not satisfactory. And in Section III, I have proposed an alternative answer to the argument which I think is sufficient to refute it.

I. Formulation of the Argument from Perceptual Relativity

The Proposition of Perceptual Relativity

However we may finally decide to interpret it, the Argument from Perceptual Relativity must include, either as a premise or as a part of a premise, a proposition which we may call "the proposition of

[3] R. M. Chisholm, "The Problem of Empiricism," and C. I. Lewis, "Professor Chisholm and Empiricism," *The Journal of Philosophy*, Sept. 9, 1948.

perceptual relativity." This proposition may be formulated as follows: *If P is a statement about the physical world, there are some conceivable* (i.e., logically possible) *conditions of observation under which any statement which refers only to sense-data would be false even though P were true.* This means, to take a very simple example, that if *P* is the physical statement "I am now looking at a red book," the fact that *P* is true does not guarantee that the sense-datum statement "Redness now appears" is also true. It also means much more than this, however: it means that there is no sense-datum statement whatsoever, no matter how carefully qualified, no matter how ingeniously constructed, which could not conceivably be false although *P* is true. And the reason that this is so, according to the proposition of perceptual relativity, is that there will always be some conceivable conditions of observation — certain kinds of illumination, for example, or certain abnormalities of the visual organs — which could make any given sense-datum statement false even though *P* is true.

Now I think it is fair to say that the proposition of perceptual relativity appears to be universally accepted by scientists and philosophers. It is frequently used as a premise, for example, by philosophers who wish to prove that no physical statement can be conclusively refuted by empirical means.[4] To refute a physical statement *(P)* conclusively, they point out, we should have to refute some sense-datum statement *(S)* which could not conceivably be false if *P* were true. But this we can never do, they maintain, because it is always possible to think of some physical conditions of observation (described, let us say, in physical statement *C*), such that, if *P* and *C* were both true, *S* would be false. In some cases, to be sure, it might be *highly improbable* that the experimental apparatus is faulty or that the perceptual organs of the observer have suddenly become quite abnormal or that some other distorting condition of observation happens to obtain; but, they argue, it is always *logically possible* that an observation is affected by such distorting conditions. Thus the fact that *S* is false, they conclude, could be at very best *strong* evidence, not *conclusive* evidence, that *P* is false;

[4] *Vide*, e.g., Reichenbach, *Experience and Prediction* (Chicago: University of Chicago Press, 1938), pp. 87–88. From the proposition that physical statements cannot be conclusively refuted, Reichenbach then infers that certain forms of extreme empiricism are invalid. His argument is one form of the Argument from Perceptual Relativity.

and it will always be logically possible to "save" P no matter how much unfavorable evidence there may be.[5]

I think it is also fair to say that the proposition of perceptual relativity appears to be almost too obvious to require any defense; and if anyone were rash enough to express some doubt about it, he could probably be silenced by repeating some of the arguments used by Descartes in his first and second *Meditations*. It is important to remember that the proposition of perceptual relativity can be proved merely by showing that it is *conceivable* that any particular sense-datum statement should be false when a given physical statement is true; and this much could apparently be shown, as Descartes suggests, simply by pointing out that it is *conceivable* that there should be a malicious demon who causes our sense-data to vary independently of the physical objects or events which we are attempting to perceive. Most philosophers and scientists, however, would probably also be willing to assert a much stronger proposition than this: they would probably agree that it is in fact *technically possible*, at the present time, to *perform* the functions of such a demon merely by altering the condition of the observer's brain in certain known ways. Consequently, although we shall later have to re-examine the evidence for the proposition of perceptual relativity, it is not unreasonable to say that there is an exceedingly strong prima facie case for the truth of this proposition.

Let us now try to decide how the proposition of perceptual relativity can best be used in an argument against the thesis of radical empiricism. It is very important, as we shall later see, to understand exactly what the radical empiricist must prove in order to defend his position against the Argument from Perceptual Relativity; and for this reason the Argument from Perceptual Relativity must be very carefully formulated.

The Apparent Inconsistency of the Radical Empiricist

The fact which stands out most clearly is the undeniable fact that the proposition of perceptual relativity is incompatible with the thesis of radical empiricism. This fact is easily demonstrated if it is not already apparent. The meaning of any given physical statement *(P)*, according to the thesis of radical empiricism, can be fully expressed by

[5] This proposition comes close to being a dogma of certain schools of thought about the philosophy of science. If what I say in Part III of this paper is true, however, there are grounds on which this proposition could reasonably be denied.

a conjunction of other statements (S, S_1, S_2, etc.) which refer only to sense-data. The thesis of radical empiricism implies, therefore, that there will necessarily be some sense-datum statements (e.g., S) which are actually entailed by P. According to the proposition of perceptual relativity, on the other hand, there are always certain conceivable conditions of observation (described, let us say, in statement C) such that if P and C were both true, S would be false.[6] Thus anyone who accepted both the thesis of radical empiricism and the proposition of perceptual relativity would be accepting the following two propositions: (1) Any given physical statement *(P)* entails statements (e.g., S) which refer only to sense-data. (2) There are some conceivable physical conditions under which any sense-datum statement (e.g., S) would be false even though P were true. The first proposition asserts that it is *not* conceivable that P should be true if S is false. The second proposition implies that it *is* conceivable that P should be true if S is false. Thus it is undeniable that these two propositions are incompatible; and it is undeniable, therefore, that one of them must be false.

It may not be immediately clear, however, just how the fact that these two propositions are incompatible can best be used in an argument against the thesis of radical empiricism. It is not unlikely, to be sure, that many philosophers, quite unaware of their own inconsistency, have accepted both of these propositions; but however embarrassed these philosophers might be to discover that fact, it is obvious that an argument *ad hominem* will not refute the thesis of radical empiricism.

It is equally obvious that the thesis of radical empiricism cannot be refuted simply by showing that it *is* incompatible with the proposition of perceptual relativity; for this fact, of course, proves merely that one of the two propositions is false and does not tell us which one. There is no reason to assume, moreover, that the radical empiricist will readily co-operate with his critic by admitting that he has been mistaken in his analysis of physical statements. He has presumably arrived at this

[6] Chisholm goes farther (*op. cit.*, p. 513) and says that there are always some conditions (described in statement C) such that the conjunction of P and C *entails not-S*. But the facts which he mentions about the relativity of sense-data to observation conditions, could prove *at most* my weaker statement: "If P and C were true, then S would be false" — i.e., a statement which might express a "natural" rather than a logical relationship between antecedent and consequent. (By a "natural" relationship I mean one which exists in virtue of the laws of nature.) Both statements are incompatible with "P entails S," however, so that Chisholm's argument is not seriously affected by this reformulation.

analysis after careful reflection about the meaning of physical statements; and he presumably believes, therefore, that he has some reasons, of the appropriate kind, for rejecting any proposition which is incompatible with his analysis. There is no doubt, in short, that he must make a choice between the two alternatives; but a satisfactory formulation of the Argument from Perceptual Relativity cannot assume that one of these two alternatives is more rational, or will necessarily appear more attractive, than the other.

It might seem, therefore, that the proper way to refute the thesis of radical empiricism is to present *scientific evidence* in support of the proposition of perceptual relativity. It might seem, in other words, that, by including such evidence among its premises, the Argument from Perceptual Relativity could be construed as a *proof* that the proposition of perceptual relativity is true and as a *proof,* therefore, that the thesis of radical empiricism is false. But any attempt to formulate an argument of this kind will run into a difficulty which is typical of all such attempts to refute a theory of meaning — the difficulty, namely, that the sentences which are used to state evidence against the theory must themselves be interpreted in terms of some theory of meaning. The radical empiricist who asserts that P entails S, therefore, cannot possibly be refuted by appealing to some supposed physical or psychophysical *fact* — to the "fact," for example, that there are certain conditions under which P could be true although S were false. For we cannot even know what it *means* to say that a given physical statement (P) is sometimes true although S is false unless we first know how to interpret the sentence in which P is formulated. And if, on the one hand, we interpret this sentence in such a way that S *does* express part of the meaning of P, then it simply *cannot* be a fact that P is true when S is false. And if, on the other hand, we interpret this sentence in such a way that S does *not* express part of the meaning of P, we are begging the very question at issue. This kind of dilemma is a result of the fact that questions about the meaning of a statement are logically prior to questions about its truth.[7]

[7] For this reason I am critical of Chisholm's formulation of the Argument from Perceptual Relativity (*op. cit.*). Since he seems to maintain that the thesis of radical empiricism is refuted by the *facts* of perceptual relativity, his argument might easily be construed to beg the question. Nor is it possible to appeal to the fact that reputable scientists apparently *believe* that sense perception is relative; for the radical empiricist could always answer that if they believe this, it is only because they do not accept the correct theory of meaning.

This leads to the conclusion, I believe, that the Argument from Perceptual Relativity must be construed to have the standard form and the necessary inconclusiveness of a *dialectical* argument. It must be construed to assert, on the basis of certain empirical evidence, that the philosopher who professes to be a radical empiricist actually believes — perhaps not on all occasions but at least during most of the time when he is presumably rational — that the proposition of perceptual relativity is true. This would imply, of course, that even the philosopher who professes to be a radical empiricist does not ordinarily accept the thesis of radical empiricism. And even though this fact cannot be said to refute the thesis of radical empiricism, it certainly casts doubt upon it. For it suggests that whatever the evidence may be which has led the radical empiricist to believe that the thesis of radical empiricism is true, he ordinarily finds even stronger evidence that the thesis of radical empiricism is false. Thus the Argument from Perceptual Relativity may be construed to conclude that since all philosophers find stronger evidence against the thesis of radical empiricism than for it, it is probable that the thesis of radical empiricism is false.

It is evident that even when formulated in this dialectical and inconclusive manner, the Argument from Perceptual Relativity is a very powerful argument and one which is certain to cause the radical empiricist a good deal of concern. And since it would be difficult for the radical empiricist to deny the conclusion once he has admitted that his beliefs are inconsistent, he cannot hope to refute the argument as a whole except by challenging the very first step: he must show, in other words, that the empirical evidence which is stated in the premises of the argument fails to convict him of accepting the proposition of perceptual relativity. Let us consider the nature of this empirical evidence so that we may see why the Argument from Perceptual Relativity appears to be irrefutable.

The Factual Premises of the Argument

The empirical evidence which might be adduced to prove that even the radical empiricist ordinarily accepts the proposition of perceptual relativity can be conveniently divided into two kinds. There is, in the first place, the spontaneous behavior of any investigator in an actual experimental situation. An example of such behavior is used by Lewis to illustrate his reason for rejecting the traditional forms of radical

empiricism in favor of the original form which he now accepts. Suppose, Lewis says, that I reach for what I believe to be a doorknob, "but fail to locate and turn the knob with my hand. . . . If such failure occurs, I shall be puzzled; but perhaps as much inclined to doubt my sense of touch as my sense of sight, and rather more disposed to doubt the accuracy of my coordination than either of these."[8] Our indecision in such a situation, as Lewis points out, may be disconcerting to the radical empiricist. The fact that we should be puzzled, the fact that we do not immediately say "The doorknob is gone," and the fact that we are prepared to retract such words if we do utter them — all of these facts may suggest that no one really believes that there is any particular sense-datum statement which could not conceivably be false if the statement "This is a doorknob" is true.

Now I propose to show in Section III of this paper that these facts do *not* prove the impossibility of refuting a physical statement conclusively; but for a preliminary evaluation of these facts, it is sufficient to observe merely that they do not prove any *more* than this. *At most,* in other words, these facts about our behavior in an experimental situation prove only that it is always logically possible to save a physical statement in the face of unfavorable sense experience. Even this, to be sure, would mean that the statement "This is a doorknob" does not entail any sense-datum statement of such a form that it can be conclusively refuted. But this conclusion is not incompatible with *all* varieties of radical empiricism, since it is possible to maintain, as Lewis does, that the sense-datum statements which are entailed by a physical statement are of such a form that they can*not* be conclusively refuted; and this would account, very plausibly indeed, for the fact that it is also impossible to refute a *physical* statement conclusively. Even though our behavior in an experimental situation may have serious implications for most of the traditional forms of radical empiricism, therefore, it cannot be used as evidence against a sophisticated position like the one proposed by Lewis.

The second kind of evidence, which could be adduced to prove that even the radical empiricist accepts the proposition of perceptual relativity, is the verbal evidence which can be obtained simply by *questioning* a radical empiricist about his beliefs; and this kind of evidence is equally convincing against *all* forms of radical empiricism. If a

[8] *An Analysis of Knowledge and Valuation,* p. 232

radical empiricist can be persuaded to illustrate his position by actually formulating a sense-datum statement *(S)* which he believes to be entailed by a given physical statement *(P)*, it seems always to be possible to ask him questions which will lead him to say, in so many words, that under certain conditions S might be false even though P were true. And further questioning can apparently lead him to contradict himself again and again, no matter how often he revises his formulation of S and no matter how many qualifications he has already been compelled to introduce.

Since it is this second kind of evidence which suggests most strongly that all radical empiricists have inconsistent beliefs, it is important to visualize the relevant facts concretely. And it is especially important to understand why the radical empiricist cannot find a formulation of S which will somehow "take account of" or "discount" all the distorting physical conditions which his critic can mention. Let us consider, therefore, by way of illustration, the manner in which the radical empiricist can be led into verbal contradictions if he accepts the position which is now commonly called "phenomenalism." Phenomenalism, broadly defined, is the theory that the meaning of a physical statement can be expressed by a conjunction of other statements which refer only to sense-data and that all of these other statements will be assertions about relationships among possible (or "hypothetical") sense-data. According to the simplest and most familiar variety of phenomenalism, these statements about sense-data will all have the hypothetical form: "If such and such sense-data *should* appear, then such and such other sense-data *would* appear," and the meaning of any physical statement, according to this theory, can be expressed by a simple conjunction of such hypothetical statements.[9]

[9] There are, however, other important varieties of phenomenalism. According to one defended by A. J. Ayer, for example, an adequate translation of a physical statement (P) will consist of a complex combination of disjunctive "sets" of hypothetical statements about sense-data. *Vide Language, Truth and Logic* (2nd ed.; Gollancz, 1946), p. 13. But this position need not be considered separately, since, as Chisholm has pointed out (*op. cit.*, note 3) it cannot avoid the Argument from Perceptual Relativity: however complex the disjunction may be, there are always conceivable conditions under which P would be true and the disjunction false. Philosophers who prefer Ayer's position may read the following section of this paper with the understanding that S is a *sample constituent* of a disjunctive statement entailed by P and that what is said of S is said in principle of every other constituent of the disjunction.

The Discounting of Physical Conditions

Let us suppose that a phenomenalist asserts that the physical statement "This is a doorknob" *(P)* entails a sense-datum statement *(S)* of the form: "If such and such sense-data should appear (viz., those which are characteristic of reaching towards a doorknob), then such and such other sense-data would appear (viz., those which are characteristic of touching a doorknob)."[10] And let us suppose that his critic then begins to question him in an effort to elicit the admission that there is a certain abnormal condition of bodily co-ordination (described, let us say, in statement *C*) such that, if *P* and *C* were both true, *S* would be false. What will the phenomenalist probably say in reply to such questioning? He cannot, of course, modify *S* to read: "*If bodily co-ordination is normal, then* if such and such sense-data should appear, such and such other sense-data would also appear," for this statement refers directly to a physical condition and is no longer a statement about sense-data alone.

In the first place, the phenomenalist is likely to complain that his critic is making too literal an interpretation of the words in which *S* is formulated. And there might well be some justification for this complaint, because the sense-data which we should recognize as being characteristic of reaching for, and touching, a doorknob, are so complex that even the most elaborate formulation of *S* can be nothing more than a crude attempt to express what is actually intended. The phenomenalist might plausibly maintain, therefore, that the sense-data to which he *intends* to refer in this instance are the sense-data which are characteristic of reaching for, and touching, a doorknob when the co-ordination of the observer is *not* abnormal — sense-data, for example, which do not include feelings of dizziness and other such characteristic signs of abnormal co-ordination. And thus he might argue that it is merely because of the inadequacy of language, and not through any fault of his phenomenalistic theory, that he is forced by the questions of his critic to make his formulation of *S* more and more elaborate and that he is even obliged to admit that in practice *no* formu-

[10] Phenomenalism, like most forms of radical empiricism, has both a relativistic and an absolutistic form: the relativistic form requires a reference to the speaker in each statement about sense-data; the absolutistic form does not. My examples throughout this paper always illustrate the absolutistic forms of radical empiricism, but the issue between absolutism and relativism is irrelevant to the problem under discussion.

lation of S could be sufficiently complete to express his meaning fully.

Now this argument, I believe, is valid up to a certain point. It is undoubtedly true that many distorting physical conditions are "reflected," to use a term suggested by Lewis[11] in the very sense experience which they influence. Lack of co-ordination, for example, is sometimes reflected in a feeling of dizziness. And if, in virtue of some supposed psychophysical law, the lack of bodily co-ordination described in statement C could never exist (at least when P is true) without being reflected in the sense experience which it influences, it would be theoretically possible, I believe, for the phenomenalist to formulate S in such a way that he could not be forced to admit that, if P and C were true, S would be false. Since S is a hypothetical statement, this result could be achieved by formulating the antecedent clause of S in such a way as to specify that the sense-data which reflect a lack of bodily co-ordination must not appear; the phenomenalist might do this, for example, by describing the sense-data which are "characteristic of reaching for a doorknob" in such a way that this description is logically incompatible with a description of the sense-data which *would* appear *if* bodily co-ordination were abnormal. This would mean, in effect, that the antecedent of S could never be realized if P and C were true and hence that the statement "If P and C were true, S would be false" includes three hypotheses (P, C, and the antecedent of S) which, in virtue of the supposed laws of nature, are not compatible. And since it is improbable that anybody actually believes statements of this kind (even supposing that they are meaningful), the phenomenalist cannot be forced to admit that he accepts the two incompatible statements "P entails S" and "If P and C were true, S would be false."

We may consider, by way of analogy, the statement: "If (corresponding to P) a cube of silver were placed in a glass of lukewarm water, and (corresponding to C) the temperature of the silver were 250° F., then it is not the case that (corresponding to S), if it lowered the temperature of the water, it would feel cooler than lukewarm water." To decide whether this statement is true we should have to conceive of a situation which is contrary to the laws of nature and then predict a consequence without knowing just *which* laws are presumed to have been violated. And it would be hard to prove that we have beliefs which can be expressed in statements of this form. Con-

[11] "Professor Chisholm and Empiricism," p. 520.

sequently, since the Argument from Perceptual Relativity is a dialectical argument, the phenomenalist does not need to extend his reply beyond this point. The possibility of abnormal bodily co-ordination, he may conclude, has already been "discounted" in the antecedent of *S* as he understands it.

Now the inadequacy of our sense-datum language, as we shall see in Section III of this paper, is an important factor in evaluating the Argument from Perceptual Relativity. And to point out this inadequacy might help to make phenomenalism more plausible to those who have been misled by the simplicity of the illustrations which phenomenalists are accustomed to use. At the present point in our discussion, however, it is essential to see only that even in a completely adequate language the phenomenalist would not be able to discount *all* distorting conditions of observation. For even if abnormal bodily co-ordination *were* always reflected in the sense-experience which it is said to "distort," there are other physical conditions which do not announce their presence in this way. And even if the phenomenalist should hesitate to admit this, he would surely not deny that it is *conceivable* that there should be some physical condition (e.g., some abnormality of the brain) which, like Descartes' demon, is perfectly deceptive. And if he admits this, he must also admit that there are some conceivable conditions under which *P* would be true although *S* is false.

The phenomenalist might then point out, however, that there is a second method of discounting a distorting physical condition of observation — the method, namely, of adding *another* if-clause to a given sense-datum statement *(S)*; and this is a method which works equally well whether or not the physical condition in question happens to be reflected in the sense experience which it distorts. Even though a certain condition of abnormal bodily co-ordination, for example, were *not* reflected in our experience of reaching for a doorknob, it might still be possible to discover this abnormal condition by performing some simple experiment — by attempting, perhaps, to place the tips of our fingers together. And in that case *S* could be modified by prefacing it with an if-clause stipulating that this experiment (described entirely in terms of sense-data) must have a result which indicates that our co-ordination is not abnormal. Thus the new and more complex statement *(S')* might have the form: "*If* such and such sense-data should appear (viz., those characteristic of moving our hands towards each other), *and*

such and such sense-data should then appear (viz., those characteristic of the meeting of our fingertips), *then* if such and such sense-data should appear (viz., those characteristic of reaching for a doorknob), such and such other sense-data would appear (viz., those characteristic of touching a doorknob)." This new statement *(S')*, we may say, is "better protected" than S because it includes an additional hypothesis. As a consequence of this increased protection, certain conditions of observation which would make S false when P is true would not make S' false when P is true; and for this reason the probability that if P is true, S' is also true, would be greater than the probability that if P is true, S is also true. This process of producing new sense-datum statements, each one better protected than its predecessor, can be continued, moreover, as long as we can think of additional if-clauses which will discount other distorting physical conditions.

Now we shall see in Section III of this paper that the validity of the Argument from Perceptual Relativity hinges on the manner in which this method of protecting a sense-datum statement is interpreted. For the present, however, it is sufficient to observe that to increase the complexity of a sense-datum statement by adding if-clauses does not help the phenomenalist in the slightest degree to prove that he does not accept the proposition of perceptual relativity. He introduces each additional if-clause in an effort to discount some particular physical condition, but there are always conceivable physical conditions under which the if-clause would fail to fulfil its purpose. There are certain conditions, for example, under which we could *appear* to be touching our fingertips in a normal manner, although in fact our bodily coordination is quite abnormal. And it is evident that any attempt to protect each if-clause with other *subordinate* if-clauses would lead to an infinite regress.

In the light of these facts, therefore, it is not surprising that the phenomenalist, when properly questioned, can be led to retract, at least verbally, any example which he may give to illustrate his theory. However precise his formulation of S may be, however well-protected with if-clauses, it seems always to be possible, by reminding him of some particular physical condition of observation, to cause him to say, in so many words, that under certain conditions P would be true although S were false. It is this kind of verbal evidence which suggests most strongly that the radical empiricist actually accepts the proposition of

perceptual relativity, even though this proposition is incompatible with his theory of meaning.

We may conclude, therefore, that to refute the Argument from Perceptual Relativity we should have to show that the sum of all of this evidence fails to be convincing proof that the radical empiricist does accept the proposition of perceptual relativity; we should have to show, in other words, that it is possible to account for all of this evidence on the assumption that the beliefs of the radical empiricist are not inconsistent. However difficult this task may seem to be, it is important to see that the task is no *more* difficult than this. We should not be obliged, for example, to refute any empirical generalizations of physics and psychology, nor to show that philosophers who profess to reject radical empiricism really accept it, nor to show that the thesis of radical empiricism is true. The Argument from Perceptual Relativity is a dialectical argument and will be refuted, therefore, if we can show just this: if we assume that the philosopher who professes to be a radical empiricist *does* accept the thesis of radical empiricism, a plausible account can be given of all the facts, especially the verbal facts, which suggest that he does *not*.

In each of the two remaining parts of this paper, we shall examine an attempt to refute the Argument from Perceptual Relativity in precisely this way. These two proposed answers to the argument have one important feature in common: they both maintain that the radical empiricist appears to make inconsistent statements — when questioned by a critic, for example — only because the words in which he formulates these statements are *ambiguous;* and they both try to show why these words are ambiguous. Otherwise, however, the two answers are very different indeed. And one of the most important differences is that the answer proposed by Lewis is intended to defend only his own position, whereas the answer which I shall propose is intended to show that the Argument from Perceptual Relativity is completely ineffective and thereby to defend *all* forms of radical empiricism against this particular argument.[12]

[12] I am much indebted to Professors Richard Brandt, Maurice Mandelbaum, and Norman Malcolm for suggestions which have enabled me to make this first part of my article clearer than it would otherwise have been.

II. Lewis' Reply to the Argument from Perceptual Relativity

For important reasons, closely related to the Argument from Perceptual Relativity, Lewis defends a position which differs from traditional forms of phenomenalism. The sense-datum statements which are entailed by a physical statement, he maintains, have the form: "If such and such sense-data should appear, and such and such other sense-data (characteristic of bodily action) should appear, then *in all probability* such and such other sense-data would appear." Although the introduction of the words "in all probability" distinguishes this position sharply from traditional forms of phenomenalism, the probability statements about sense-data do not refer to any entities except sense-data; Lewis' position, therefore, like phenomenalism, is one of the many conceivable forms of radical empiricism.

Irrelevant Consequences of the Probability Qualification

There are two consequences of Lewis' use of the probability qualification, which, at first thought, seem to protect his position from the Argument from Perceptual Relativity, but which actually do not. The first of these is the fact that none of the sense-datum statements which are entailed by a given physical statement P can be conclusively refuted by the outcome of an experiment. This fact, as we have seen, enables Lewis to account for our apparent belief that it is always logically possible to save P even though some particular experiment has had an unfavorable result. But the question at issue is not whether any given sense-datum statement (S) can be conclusively refuted, but whether S could conceivably *be false* if P is true; and this question seems to depend on the second consequence of the probability qualification.

The second consequence, assuming that the probability qualification has some reference to frequencies, is the fact that a probability statement about sense-data has the effect of discounting all distorting physical conditions which happen to occur *infrequently*. The physical statement "This is a doorknob" (P), for example, might be said to entail a probability statement (S) of the form: "If such and such sense-data should occur (viz., those characteristic of seeing and reaching for a doorknob), then in all probability such and such other sense-data would occur (viz., those characteristic of touching a doorknob)." And to say that P entails the probability statement S would be quite consistent, of

course, with the admission that on certain *rare* occasions, P would be true even though the sense-data characteristic of touching a doorknob would in fact not occur under the conditions prescribed in the antecedent clause of S. For S asserts merely that under the prescribed conditions these sense-data would occur *in all probability*. Thus a critic of Lewis' position who wishes to show that there is some physical condition under which P would be true although S were false would have to illustrate his argument by selecting a conceivable physical condition which is (1) unreflected (because otherwise it would be discounted in an adequate formulation of S) and (2) not rare (because otherwise it would be discounted by the probability qualification).

Since it is quite possible to conceive of physical conditions which meet both of these requirements, however, the Argument from Perceptual Relativity is not affected by either of the two consequences of the probability qualification which I have mentioned.[13] Even if it seemed doubtful that there actually exist any distorting conditions which are neither rare nor reflected, it is surely possible to *conceive* of such conditions (e.g., a recurrent abnormal state of the brain which affects the sense of touch). Because of such an abnormality, indeed, it might even be the case that in all probability the sense-data characteristic of a doorknob would *not* occur if P were true and the conditions prescribed in the antecedent clause of S were realized. And this would be logically impossible, of course, if P actually entailed the original and contrary sense-datum statement, S. Since the question at issue, moreover, is a question about the *meaning* of physical statements, it would be quite irrelevant to reply that, if such a condition actually existed, we should probably not make the physical assertions which we do make or that we should make these assertions only if we were irrational. Whatever we might or might not assert in such hypothetical circumstances, we can nevertheless ask ourselves, here and now, whether we believe that in such hypothetical circumstances P would be true although probability statement S were false. And apparently we do believe this. Thus it seems that even the radical empiricist who professes to hold Lewis' position cannot deny that he also accepts the incompati-

[13] I cannot tell whether or not Lewis intends to deny this in the first part of his reply to Chisholm. But he seems to admit (*op. cit.*, p. 520, last sentence) that there actually *exist* distorting conditions which are neither rare nor reflected — conditions which cause us, as he says, to make "an invalid perceptual judgment."

ble proposition of perceptual relativity. Let us now consider how Lewis proposes to explain this apparent inconsistency.

The Relativity of Probability Statements

This apparent inconsistency, Lewis maintains, is a result of the fact that the sense-datum statements entailed by *P*, because they are probability statements, are relative to their premises. It does indeed seem, as we have observed, that physical statement *P* cannot entail sense-datum statement *S*, because we can conceive of certain physical conditions (described in statement *C*) such that if *P* and *C* were true, a probability statement *T* (a contrary of *S*) would be true.[14] But since *S* and *T* are probability statements, they are, Lewis maintains, incomplete unless their premises are mentioned; and since their premises are different, these two probability statements are not incompatible and both may be true at the same time. It follows, therefore, that the two statements, "*P* entails *S*" and "If *P* and *C* were true, *T* would be true," are also not incompatible and hence that the Argument from Perceptual Relativity is refuted.

Now it is probably evident, in the light of our discussion in Section I of this paper, that this answer to the Argument from Perceptual Relativity has the *form* which any convincing answer must have. Thus Lewis does not dispute the empirical facts which serve as a basis for that argument; he does not deny, for example, that he might sometimes appear to make the two inconsistent assertions, "*P* entails *S*" and "If *P* and *C* were true, *T* (a contrary of *S*) would be true." But he attributes this apparent inconsistency to the fact that probability statements are ambiguous if they are formulated, as they frequently are in common speech, without mentioning their premises. And when the probability statements *S* and *T* are properly completed, he maintains, they will turn out to be compatible with each other.

It is not clear from the text of Lewis' reply, however, precisely how we must formulate a statement like *S* to make it complete and unambiguous. But since it is evident that any such probability statement must be completed either by reference to physical objects or by reference to sense-data, we may examine both alternatives.

Lewis might mean, on the one hand, that some *physical* statement

[14] For simplicity I am accepting Lewis' formulation. I do not believe that he could reply in the same way, however, if *not-S* were substituted for *T* (as it could be).

must be included among the premises of probability statement S when S is completely formulated.[15] In that case, however, he is conceding the very point which the Argument from Perceptual Relativity is intended to prove. For in that case, S, when properly completed, is a statement of the form: "On the premise that such and such a physical object (or physical state of affairs) exists, if such and such sense-data should appear, then in all probability such and such another sense-datum would appear." And if S must be a statement of *this* form, referring necessarily to physical objects, the thesis of extreme empiricism is admittedly false. If this mode of analysis were correct, in other words, it would be impossible, even theoretically, to express the meaning of P in statements which refer only to sense-data; for S, as well as each of the other probability statements entailed by P, would contain a physical statement as a necessary constituent. By further analysis this physical statement could in turn be translated into probability statements having the same form as S, but we should be forced into an infinite regress, of course, if we attempted to eliminate the reference to physical objects altogether.

It is also worth observing that such an interpretation of Lewis' position would generate some insuperable epistemological problems for the kind of empiricism which Lewis defends. Physical statements like P can be confirmed by empirical means only if probability statements like S, into which physical statements are supposedly analyzable, can themselves be confirmed by empirical means. It follows, therefore, that a statement like S must be what Lewis calls a "categorical probability statement" — i.e., a statement which cannot be certified as true solely by reference to the rules of probability inference, but which, in Lewis' words, "asserts the premised data of the probability determination."[16] But this implies that to confirm a statement like S we should have to confirm its premises; and if its premises include physical statements, this would mean that a particular physical statement (e.g., P) could

[15] The natural inference is that Lewis *does* mean this and, moreover, that the premise of S will be the very statement (i.e., P) which is said to entail S; for he uses the letter "P" to symbolize a physical statement, and continues to use it in illustrating the manner in which a probability statement may be completed ("Professor Chisholm and Empiricism," pp. 522–23).

[16] *An Analysis of Knowledge and Valuation*, p. 310. Cf. *ibid.*, pp. 250–251, note 4, and p. 318 *et seq.* Lewis does not say that the "empirical content" of a categorical probability statement lies entirely in its assertion of the empirical premises (*vide* p. 319).

only be confirmed, even theoretically, by first confirming P itself (which is logically impossible) or by first confirming *another* physical statement (an epistemological conclusion which Lewis and other radical empiricists hope to avoid).

The alternative interpretation of Lewis' position, however, is scarcely more satisfactory. If the premises which must be mentioned in a complete formulation of S refer only to sense-data, the Argument from Perceptual Relativity can be used against Lewis' position exactly as it is used against any other form of radical empiricism. Since statements like P, and hence statements like S into which P can supposedly be analyzed, are testable by empirical means, S must be formulated in such a way that there are certain conceivable observations which would be grounds for believing that S, in its complete form, is false. Even without going into the details of such a formulation, therefore, we may conclude that there must be certain conceivable characteristics of actual and possible sense-data, and certain relationships among them, which, if they existed, would be incompatible with the truth of S. But since the fact that these characteristics and relationships existed could always be attributed, without logical inconsistency, *either* to the fact that P is false *or* to the presence of certain physical conditions, it would never be logically inconsistent to believe that S is false although P is true. Hence P cannot be said to entail S, and we are forced to conclude that physical statements cannot be analyzed into probability statements about sense-data.

The probability qualification would protect Lewis' position against this argument only if this qualification were interpreted to mean that statements like S have no empirical content — an interpretation which is incompatible with empiricism and which Lewis explicitly rejects.[17] If statements like S assert their premises, or if they make any material assertion whatsoever about the characteristics of actual or possible sense-data or about the relationships among them, the fact that S is false would apparently not require us to conclude that P is also false. For it appears that we could always find assumptions about the physical conditions of observation which could account for the fact that S is false although we continue to believe that P is true.

This conclusion suggests that the effectiveness of the Argument from Perceptual Relativity does not depend on the manner in which S

[17] Cf. note 16, above.

is formulated and that anyone who wishes to defend the thesis of radical empiricism will have to find an answer of a very different kind. I shall propose such an answer in the next and final part of this paper.

[*To be concluded*]

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PHILOSOPHY AND BIOGRAPHY: THE CASE OF DAVID HUME

INTERPRETATION of a philosophical text, as indeed of all texts, must derive primarily from the text itself, the written words which express certain relations of ideas. Yet especially in the case of earlier philosophers, the reader may be assisted by secondary information, various types of historical knowledge, such as the precise meaning of key words at the time written, the intellectual climate of the age, the biography of the author. Biography may not only provide information about sources and motives but can provide information that compels a reconstruction of character based upon the interpretation of a text. And knowledge of character, in turn, may be of great utility in the comprehension of textual passages which are ambiguous because of oblique presentation or of the possible presence of irony. When it becomes desirable to deal with the biography and the character of a philosopher in order to gain fuller understanding of his meaning, it is requisite that the biographical data employed be true and that the character inferred be consistent with them.

The necessity of emphasizing these truisms may be illustrated in the case of the two traditions of exegesis concerning David Hume, in one of which he is portrayed as a devoted inquirer into truth and in the other, as a charlatan in philosophy. In the first tradition, Hume's ideas, however possibly fallacious or inconsistent, are taken as his best effort to deal with specified intellectual issues and are consequently given serious consideration. In the second tradition, his ideas are taken as an attempt to do something other than strictly to inquire into truth and are consequently subject to summary, and even contemptuous, dismissal. It is the present purpose to investigate this second tradition and to prove that it is based upon distortion of psychology and misrepresentation of fact.

I

The questioning of Hume's motives, of his intellectual and moral integrity, began with some of his contemporaries in the second half of

the eighteenth century. Dr. John Brown, for instance, described Hume as a writer "of our own Times, bent upon *Popularity* and *Gain*...." Dr. William Warburton wrote to Hume's publisher, Andrew Millar: "You have often told me of this man's moral virtues. He may have many, for aught I know; but let me observe to you, there are vices of the *mind* as well as of the *body:* and I think a wickeder mind, and more obstinately bent on public mischief, I never knew." Dr. James Beattie regarded him as spawning in an unnatural manner "the vile effusion of a hard and stupid heart, that mistakes its own restlessness for the activity of genius, and its own captiousness for sagacity of understanding...." James Boswell speculated that "vanity, as a fascinating mistress, seized upon his fondness, and never quitted her dominion over him." Dr. Samuel Johnson called Hume a blockhead and a rogue and asserted flatly that he lied.[1]

Noteworthy instances in the nineteenth century include John Stuart Mill, who, though generally regarded as a distinguished follower of Hume, restated the same thesis in severe language:

> Hume possessed powers of a very high order; but regard for truth formed no part of his character. He reasoned with surprising acuteness; but the object of his reasonings was, not to obtain truth, but to show that it is unattainable. His mind, too, was completely enslaved by a taste for literature; not those kinds of literature which teach mankind to know the causes of their happiness and misery, that they may seek the one and avoid the other; but that literature which without regard for truth or utility, seeks only to excite emotion.[2]

And T. H. Huxley, also in the tradition of Hume, was in general agreement:

> ...Hume exhibits no small share of the craving after mere notoriety and vulgar success, as distinct from the pardonable, if not honourable, ambition for solid and enduring fame, which would have harmonized better with his philosophy. Indeed, it appears to be by no means improbable that this peculiarity of Hume's moral constitution was the cause of his gradually forsaking philosophical studies, after the publicaton of the third part...of the Treatise, in 1740, and turning to those political and historical topics which were likely to yield, and did in fact yield, a much greater return of that sort of success which his soul loved.[3]

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[1] John Brown, *Estimate of the Manners and Principles of the Times* (London, 1757), Sec. VI, p. 57; William Warburton, *A Selection from Unpublished Works,* ed. Francis Kilvert (London, 1841), pp. 309–310; James Beattie, *Essay on Truth* (4th ed.; London, 1773), p. 482; James Boswell, *The Hypochondriack,* ed. Margaret Bailey (Stanford University, 1928), II, 157; Samuel Johnson in Boswell, *Private Papers* (New York, 1928–34), I, 128, and XIII, 23.

[2] J. S. Mill, review of Brodie's *History of the British Empire,* in *Westminster Review,* II (1824), 34.

[3] T. H. Huxley, *Hume* (New York, 1894), pp. 10–11.

In the twentieth century the charge of unworthy motives has continued to be leveled against Hume, two instances of which in the past decade are to be noticed here. In 1939, the Danish scholar Professor Vinding Kruse wrote:

> Hume was a far more complex, versatile, and ambitious character than, for instance, Kant or Spinoza. He combined two glaring contrasts: he was not only, like these, a great solitary thinker, knowing but one purpose, the realization of truth; he was, indeed, a man with many irons in the fire, a man with divers aims. And among these aims the realization of truth was not the most important; for Hume was possessed by literary ambition to such an extent that he set aside all considerations, even the consideration of truth, in order to win the favour of the public. For instance, it is well known that in his later life Hume time after time suppressed his most radical ideas in order to be better appreciated by the public, and it is characteristic that in his autobiography he describes the "ruling passion" of his life not as a Spinoza would have done, as the urge of philosophical cognition, but love of literary fame.
>
> And this literary ambition was not of the nature which was content with the immortality usually accorded to great thinkers by a late posterity; but, practical and concrete as he was, he craved first and foremost the admiration of his contemporaries. And therefore he was consistently led to regard the judgement of the public as his supreme court, his only guide in his literary work.[4]

The latest instance comes from Professor John H. Randall, Jr.; and, since it is perhaps the most extensive treatment since that of Beattie and also the most far-reaching in its implications, it will require fuller presentation.[5] The customary antithesis between Spinoza and Hume as to personality and thought is repeated. "Hume...set as his goal precisely those usual surroundings of social life, the pleasures of the senses, riches, and fame [which had been rejected by Spinoza]. He was never melancholy but 'of an open, social, and cheerful humour'; he was satisfied when he had made a competence; and he delighted all his life in setting forth opinions diametrically opposite to those of his fellow men."

Professor Randall presses the charge, developing it along somewhat new lines:

> Hume wrote for two purposes: to make money, and to gain a literary reputation. He acknowledged, "My ruling passion is the love of literary fame." As a youth he studied Locke and Berkeley, and Cicero and the ancient Academic skeptics; in their thought he saw the chance to reach startling conclusions and

[4] Vinding Kruse, *Hume's Philosophy in his Principal Work, A Treatise of Human Nature, and in his Essays*, trans. P. T. Federspiel (London, 1939), p. 8.

[5] John H. Randall, Jr., "David Hume: Radical Empiricist and Pragmatist," in *Freedom and Experience: Essays Presented to Horace M. Kallen*, ed. Sidney Hook and Milton R. Konvitz (Ithaca and New York, 1947), pp. 289–312.

become a shocking success. Berkeley had attacked Newtonian science for serious reasons; he was a crusader, interested in a sound and consistent science. Hume subtly criticized it primarily to attract attention to the Scotsman David Hume. He hated Newton and Locke as Englishmen, besides; for next to priests Englishmen were his most cordial hatred....

He was early seized with a passion for literature....Since he couldn't shock men by a new theory of science, he would try politics and religion....

Philosophy was after all a rather narrow field; so he turned to history and wrote a good Tory history of the Stuarts because the Whigs were in power....

And yet — David Hume is beyond all question the ablest British philosopher; though his interest in philosophy was largely to startle Englishmen into recognizing the Scottish writer David Hume, and he remained a good sound Tory at heart....He was extremely acute, and malicious throughout. Just because he had no real interest in either science or religion, no deep feeling for the values involved, he was able to be utterly consistent in the pricking of metaphysical bubbles, both scientific and theological....

This intellectual personality of Hume's makes clear why his thought is so elusive, why it is so difficult to emerge from his subtle dialectic with definite conclusions. He was wholly uninterested in building up a consistent position of his own, either a new theory of science or a new natural theology. Though the former is certainly implied in his thought, he was always ready to sacrifice it to the literary display of his dialectical skill....He was interested, not in establishing a method and conclusions of his own but in commenting on the methods and conclusions of others....Hume's whole attitude is: I don't for a minute believe it, any more than you do. But refute it if you can; I won't.

Hume employs this skepticism, not as a position to be defended, but as a literary device.[8]

Those eighteenth-century writers who professed to believe that Hume was a charlatan in philosophy also believed — and with admirable consistency — that his philosophy was inconsequential. The nineteenth-century writers made somewhat more generous concessions. It is, however, Professor Randall's paradox of the philosopher of unworthy motives ("to make money, and to gain a literary reputation") who is "beyond all question the ablest British philosopher" that staggers psychology and that demands scrutiny. The present investigation will be mainly confined to biographical materials; but, first, it will be helpful to point out certain psychological weaknesses in that curiously unresolved paradox of the intellectual charlatan who was Britain's ablest philosopher.

II

The psychological weaknesses inherent in Professor Randall's paradox may be conveniently put in the form of generalized questions

[8] *Ibid.*, pp. 293–294, 296–297.

which require answers prior to specific biographical evidence. First, would a rational man of modest circumstances who was desirous of making money by writing devote the first ten years of his career to the study and publication of abstract philosophy? Second, would a man writing on philosophy, or on any other subject for that matter, desire *not* to gain a reputation? Third, would a writer wishing to attain a "shocking" success cut out of his manuscript before publication the single section most likely to provide him with that shock? Fourth, is not the risking of possible personal safety and of almost certain obloquy to be taken as a presumption of sincerity rather than of insincerity?

These points have previously been raised by one or another of the defenders of Hume's integrity. Such defenders, who were not necessarily followers of Hume's philosophy, include the biographers, John Hill Burton and J. Y. T. Greig, and also Leslie Stephen, Charles W. Hendel, Jr., and, more recently, Norman Kemp Smith. The above objections would have to be faced in the case of a writer of whatever name. In the case of David Hume they must be answered, not only in terms of general human nature, but also in the concrete data of his biography.

III

The single document which has been most consistently employed to build up the case for Hume's unworthy motives is his autobiography. Now a full autobiography is a boon to the biographer; a brief one, a curse. Of the latter class is David Hume's *My Own Life*.[7] Its seven pages have confused the general reader and troubled the biographer. The biographer's troubles are both factual and semantic. By way of illustrating the difficulties of fact:

> In 1752, the Faculty of Advocates chose me their Librarian, an Office from which I received little or no Emolument, but which gave me the Command of a large Library. I then formed the Plan of writing the History of England; but being frightened with the Notion of continuing a Narrative, through a Period of 1700 Years, I commenced with the Accession of the House of Stuart....

This account seems straightforward and unambiguous, but actually it is not. Many of Hume's manuscript memoranda of reading which seem to belong to the 1737–1740 period refer to historical works, both

[7] The text used here is that in *Letters of David Hume*, ed. J. Y. T. Greig (Oxford, 1932), I, 1–7. No further page references will be given for this short work.

ancient and modern.[8] And in the "Advertisement" to the *Treatise* of 1739, Hume announced that, after dealing with the Understanding and the Passions, he intended to proceed "to the examination of Morals, Politics, and Criticism; which will complete this Treatise of Human Nature."[9] Politics, in the eighteenth century, included political practice as well as theory; so here already in 1739 is intimation that Hume was prepared, in due course, to proceed to the writing of history. Definitive evidence that he did do so at an early date is to be found in a series of four manuscripts dating from 1745 through 1749, the first of which is a 64-page narrative epitome of British history from the Roman Invasion through the reign of Henry II, together with a few remarks about that of Henry VIII.[10]

The simple statement in *My Own Life,* that "I then [1752] formed the Plan of writing the History of England...," must consequently be expanded by the biographer to read somewhat as follows:

> The Advocates' Library appointment in 1752 at last gave me the opportunity for which I had been waiting even since originally planning my career many years ago, that is, to write the history of England. But previous experiments in writing that history from the remote beginnings convinced me that it would be preferable to start with the latest age before the contemporary, that of the accession of the House of Stuart, and to work backwards.

The seven-page autobiography of a man of sixty-five who has lived a full and varied life is inevitably a work of high compression and cannot deal with all the *if's, and's,* and *but's* which lie behind the simplest statement of fact.

The most significant passages in *My Own Life,* from the point of view of indicating Hume's possible unworthy motives as philosopher, are those dealing with literary ambition and with the life of letters in general. These selections deserve careful study, to facilitate which the key words are here italicized:

> But this Narrative shall contain little more than the History of my Writings; as indeed, *almost all my Life has been spent in literary Pursuits and Occupations.*

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[8] See E. C. Mossner, "Hume's Early Memoranda, 1729–1740: The Complete Text," *Journal of the History of Ideas,* IX (1948), 492–517. The notes in question are reprinted, pp. 503–517, and are discussed, pp. 495–496.

[9] Hume, *Philosophical Works,* ed. Green and Grose (London, 1874–75), I, 303.

[10] For a full description, see E. C. Mossner, "An Apology for David Hume, Historian," *PMLA,* LVI (1941), 675–676.

I passed through the ordinary Course of Education with Success; and was seized very early with *a passion for Literature which has been the ruling Passion of my Life,* and the great Source of my Enjoyments.

My studious Disposition, my Sobriety, and my Industry gave my Family a Notion that the Law was a proper Profession for me: But *I found an unsurmountable Aversion to every thing but the pursuits of Philosophy and general Learning;* and while they fancyed I was poring over Voet and Vinnius, Cicero and Virgil were the Authors which I was secretly devouring.

I resolved to make a very rigid Frugality supply my Deficiency of Fortune, to maintain unimpaired my Independency, and *to regard every object as contemptible, except the Improvement of my Talents in Literature.*

I had always entertained a Notion, that *my want of Success, in publishing the Treatise of human Nature, had proceeded more from the manner than the matter;* and that I had been guilty of a very usual Indiscretion, in going to the Press too early.

In 1751, I removed from the Countrey to *the Town; the true Scene for a man of Letters.*

Even *my Love of literary Fame, my ruling Passion,* never soured my humour, notwithstanding my frequent Disappointments.

These passages from *My Own Life* are fraught with difficulties stemming from confusion over the meanings of words: At the outset, it is obvious that Hume regarded himself as a man of letters and that his life was dedicated to literature. Right here, perhaps, the modern philosopher will balk. "I thought," he may comment, "that we were dealing with a philosopher and not with a *mere* literary man." Yet it should seem clear that Hume did not restrict literature to fine letters. To Hume (and to the eighteenth century in general) literature included "Philosophy and general Learning." Consequently, by his "Talents in Literature," Hume implied his ability to think and to present his thoughts in writing on nearly all intellectual subjects. It is further to be remarked that Moral Philosophy as studied at the Scottish universities in the eighteenth century was devoted to man and his multifarious activities, including — to employ modern terminology — metaphysics, psychology, ethics, political theory and history, social institutions, rhetoric, literary criticism and history, and aesthetics.

In the second excerpt from *My Own Life* above, Hume refers to "a passion for Literature which has been the ruling Passion of my Life . . ."; and in the last, he refers to "my Love of literary Fame, my ruling Passion. . . ." Here again, the modern philosopher is wont to bring

these two passages together, rightly enough to be sure, and to inquire: "Is this not an inadvertent admission on the part of Hume that *fame*, rather than *literature* (even in the extended eighteenth-century sense), was his real objective? And is not Hume thereby convicted in his own words of having affected singularity of opinion for the sole purpose of attracting attention to himself?" These questions are crucial and will be given full consideration; but the only legitimate answers must start with the meanings that Hume attached to key words and phrasings.

The diction employed by Hume is partly the diction of popular psychology, especially Pope's in the *Essay on Man* (a work that he read on its first appearance), and partly his own in the *Treatise of Human Nature*. Some of the confusion lies in the fact that in the *Treatise* Hume took over diction from earlier systems and gave approbation to terms that had previously been employed with disapprobation, and conversely, as in the cases of *pride* and *humility*. It is meet, therefore, to turn to the *Treatise* itself, especially, to several sections of Book II, "Of Pride and Humility," "Of the Love of Fame," "Of Curiosity, or the Love of Truth," to which may be added, "Of Greatness of Mind," from Book III. Yet happily a passage at the close of Book I provides an epitome of the whole subject and is of especial significance in that Hume is not generalizing but is writing strictly of himself. The salient parts are italicized here:

> At the time, therefore, that I am tir'd with amusement and company, and have indulg'd a reverie in my chamber, or in a solitary walk by a river-side, I feel my mind all collected within itself, and am naturally inclin'd to carry my view into all those subjects, about which I have met with so many disputes in the course of my reading and conversation. *I cannot forbear having a curiosity to be acquainted with the principles of moral good and evil, the nature and foundation of government, and the cause of those several passions and inclinations, which actuate and govern me.* I am uneasy to think I approve of one object, and disapprove of another; call one thing beautiful, and another deform'd; decide concerning truth and falshood, reason and folly, without knowing upon what principles I proceed. *I am concern'd for the condition of the learned world,* which lies under such a deplorable ignorance in all these particulars. *I feel an ambition to arise in me of contributing to the instruction of mankind, and of acquiring a name by my inventions and discoveries.* These sentiments spring up naturally in my present disposition; and shou'd I endeavour to banish them, by attaching myself to any other business or diversion, I feel I shou'd be a loser in point of pleasure; and *this is the origin of my philosophy.*[11]

[11] Hume, *Philosophical Works,* I, 550. The italics are mine, Hume's own being omitted.

Here, then, is Hume's own analysis of why he was compelled to write philosophy. The passage may be paraphrased, somewhat as follows, in order to clarify the ambiguities of the psychological diction employed in *My Own Life:*

I cannot help (*ruling passion*) but inquire into fundamental ideas of philosophy, psychology, ethics, and society (*passion for literature* or *curiosity, or the love of truth*). In the learned world, I am unable to find satisfactory answers to the problems which I am compelled to face. I feel that I must, therefore, present my own conclusions to that learned world in the hope (passion of *sympathy*) of instructing and bettering it. The personal satisfaction (*love of fame*) which I would get from the consideration and, particularly, from the approbation of the learned world, drives me on through all the intellectual difficulties and physical exertions necessary to the completion of my research. It is thus psychologically impossible for me *not* to be a philosopher, an inquirer into truth.

IV

It is now fitting for the biographer to review the major facts of Hume's career in order to determine, apart from the account in *My Own Life*,[12] whether he was, indeed, motivated primarily by the desire to make money. In this brief review, which is so crucial to the problem at hand, all statements of fact are to be fully documented so that the unbeliever may be able to verify them for himself.

Born as the second son of a country-gentry family which was, in his own words, "good" but "not rich," David Hume's inheritance brought him little more than £40 a year of income.[13] In 1750, at the age of thirty-nine, he was able to exult that this sum had been boosted to £50; and in 1768, after a highly successful career, he commented in retrospect: "Had I been born to a small Estate in Scotland of a hundred a year, I shoud have remaind at home all my Life, planted and improved my Fields, read my Book, and wrote Philosophy. . . ."[14] This statement points to the conclusion that Hume would never have permitted his passion for learning and his pursuit of truth to be thwarted under any circumstances, but that his insecure financial situation, to a considerable extent, determined his actual mode of living. After passing through Edinburgh University "with success," he was prevailed upon by his family to choose a career which would provide him with a

[12] All unidentified quotations in the present section are taken from *My Own Life.*

[13] The estimate is Greig's (*Letters of David Hume,* I, 23, n. 4) and is corroborated by manuscript materials which I have inspected.

[14] *Ibid.,* II, 188.

respectable living; and, in the tradition of the Humes of Ninewells, he chose that of law. Yet his heart was not in the law. Neglecting it from the start, he threw it up as "nauseous"[15] in 1729 when he believed that he had made a momentous philosophical discovery.

This precipitous decision at the age of eighteen meant that David Hume was deliberately flouting potential security and resigning himself, for a minimum of ten years, to certain insecurity. It was probably this decision also that inspired his mother's famous remark — a remark, unfortunately, that has no documentary basis — that "our Davie's a fine good-natured crater, but uncommon wake-minded."[16] The good Lady Ninewells may easily be forgiven for her seeming obtuseness. During those ten years of study, her son devoted himself to reading and to writing, being at one time, 1733–1734, on the verge of a nervous breakdown from overapplication. The several months' trial in 1734 of a business career at Bristol was never really for the purpose of a business career and of business rewards. The trial was for the recovery of mental health as Hume informed a physician[17] in London at that time: "For this reason I resolved to seek out a more active Life, & tho' I cou'd not quit my Pretensions in Learning, but with my last Breath, to lay them aside for some time, in order the more effectually to resume them."[18]

The following three years, 1734–1737, were spent in France largely in the composition of the *Treatise,* during which period Hume presumably used up, not only current income, but most of his savings, and perhaps some borrowings. Back in London in the late summer of 1737, he had two immediate purposes: to prepare the manuscript for the press and to secure good terms for publication. Revision of the manuscript resulted in the excision of the section "Of Miracles," for prudential and diplomatic reasons: "I am afraid [it] will give too much offence," wrote Hume to Henry Home (later Lord Kames) at Edinburgh, "even as the world is disposed at present. . . . I am at present castrating my work, that is, cutting off its nobler parts; that is, endeavouring it shall give as little offence as possible, before which, I

[15] *Ibid.,* I, 13.

[16] John Hill Burton, *Life and Correspondence of David Hume* (Edinburgh, 1846), I, 294 n.

[17] Probably Dr. Arbuthnot. See E. C. Mossner, "Hume's Epistle to Dr. Arbuthnot, 1734: The Biographical Significance," *Huntington Library Quarterly,* VII (1944), 135–152.

[18] Hume, *Letters,* I, 17.

could not pretend to put it into the Doctor's hands."[19] The last reference is to Doctor, later Bishop, Joseph Butler, famous author of the *Analogy of Religion* (1736) and of the *Fifteen Sermons Preached at the Rolls Chapel* (1726). No distortion of interpretation can ever succeed in making this action of Hume's argue an overweening desire to be a "shocking" success. Concerning publication, Hume ultimately signed what might seem to be an adequate contract for an unknown writer, but which was actually one that he came to regret because it restricted him from bringing out a second and corrected edition.[20]

In a letter from London of February 13, 1739, written shortly after publication of the first two volumes of the *Treatise,* Hume advised Henry Home: "In looking over your Letters I find one of a twelvemonth's Date, wherein you desire me to send down a great many Copys to Scotland. You propos'd no doubt to take the Pains of recommending them, & pushing the Sale. But to tell the Truth there is so little to be gain'd that way in such Works as these, that I wou'd not have you take the Trouble."[21]

This passage, which does not appear in any of the printed editions of Hume's letters, is substantial evidence that mere sales were not what he wanted. The letter continues with a passage, which has appeared in print, and which gives specific indication of what he really wanted: "If you know anybody that is a Judge, you wou'd do me a sensible Pleasure in engaging him to a serious Perusal of the Book. Tis so rare to meet with one, that will take Pains on a Book, that does not come recommended by some great Name or Authority, that, I confess, I am as fond of meeting with such a one, as if I were sure of his Approbation."

Hume's comment in *My Own Life* on the reception of the *Treatise* is well known, so well known as to provide further trouble for the biographer: "It fell *dead-born from the Press;* without reaching such distinction as even to excite a Murmur among the Zealots." Yet the *such* and the *even* of the sentence should indicate that Hume's basic aim was not "to excite a Murmur among the Zealots." The implication is

[19] *Ibid.,* I, 24–25.

[20] *Ibid.,* I, 36–37.

[21] MS letter in the Abercairny Papers, Register House, Edinburgh. This letter, and others, will appear in a supplementary volume to Greig's edition to be brought out by the present writer in collaboration with Professor Ramond Klibansky of McGill University.

that in the desire to have the foremost philosophical minds react favorably, or even unfavorably, to his system, he was bitterly disappointed; and, to rub it in, the work was not noticed even by the zealots. By an historical accident, tragic from Hume's point of view, there were few eminent philosophers available to deal with the *Treatise* at the time of publication and, indeed, for many years later. In Britain, Berkeley had retired into the Neoplatonism of his *Siris;* Butler had apparently abandoned philosophical studies after the appearance of the *Analogy;* Hartley seemingly never knew the *Treatise;* Kames and Reid studied that work from the outset, to be sure, but it took the one twelve years to formulate his public reply and the other, a full quarter of a century. The sole exception was Hutcheson, with whom, as will soon be made evident, Hume formed a personal acquaintance. On the Continent, Leibniz and Malebranche were dead, and Kant was but a boy. There is no evidence that either Wolff or Condillac was aware of the *Treatise,* and only questionable evidence in the case of Maupertuis. The contemporary philosophical tide was definitely at an ebb.

Yet if the *Treatise* failed to attract the attention of distinguished philosophical minds, or even to excite the religious zealots, it was not completely overlooked. The hostile and scurrilous review in the *History of the Works of the Learned* is notorious; and notices and reviews in three French and two German periodicals have recently been brought to light.[22] None of these reviews, however, indicated the slightest comprehension of Hume's proposed intellectual revolution, and their very obtuseness could only have intensified his disappointment. Yet one zealot did produce, in an English periodical of 1740, a hitherto unknown, "short Answer to a long Book lately published."[23] As philosophy, however, its murmur was barely audible.

With no career, or even prospect of a career in mind, Hume returned to Scotland early in 1739, where he could live most reasonably with his mother and brother and where he could prosecute the studies for which he had already sacrified so much. Abstract and unintelligible, the critics were calling his book. He now determined to show them that his philosophy had important practical applications and that it could be presented in such a manner as to be comprehensible to all educated

[22] See E. C. Mossner, "The Continental Reception of Hume's Treatise, 1739–1741," *Mind,* LVI (1947), 31–43.

[23] See E. C. Mossner, "The First Answer to Hume's *Treatise:* An Unnoticed Item of 1740," shortly to appear in *Journal of the History of Ideas.*

men. The *Essays, Moral and Political,* Hume's first venture at practical application, was moderately well received but reached only three editions between 1741 and 1748. To the third volume of the *Treatise,* he also devoted much effort; it was published in 1740 with the advice and the patronage of Scotland's foremost moral philosopher, Professor Francis Hutcheson of Glasgow University. But it, too, met with little notice beyond a few casual and uninformed reviews.

The *Treatise,* however, was not dead. It had, rather, a perverse sort of vitality. When, in 1744–1745, David Hume was proposed by the Lord Provost of Edinburgh, his friend John Coutts, as a candidate for the Professorship of Moral Philosophy at Edinburgh University, the *Treatise* was sufficiently alive to be used against his candidacy by Principal William Wishart. The inimical and biased treatment at the hands of Wishart drove Hume to compose *A Letter from a Gentleman to his Friend at Edinburgh; containing some Observations on a Specimen of the Principles Concerning Religion and Morality, said to be maintained in a Book lately published intituled, A Treatise of Human Nature, &c.,* which was sent to the press at Edinburgh by Henry Home in May, 1745.[24] This anonymous tract, the very name of which was hitherto unknown and no copy of which has yet come to light, may possibly prove to be as fruitful in the understanding of Hume's motives and of the *Treatise* itself as *An Abstract of a Treatise of Human Nature* (1740), which was discovered little more than a decade ago.[25]

Shortly before the failure of the professorial candidacy, Hume had accepted his first money-making position — the Bristol clerkship may be discounted — that of tutor to the mad Marquess of Annandale. The position came to him, as did all positions that he ever held, fortuitously. The wealthy young nobleman had been "charmed" by some of Hume's essays.[26] Never eager to be a tutor because of the constrained life, Hume accepted this offer because of the good salary and the hope of an annuity after some years' service. His devotion to the life of the inquirer and the man of letters dictated this acceptance, as it was to dictate acceptance in 1746 of General St. Clair's offer of a secretaryship on the proposed military expedition to Canada, which ended, oddly

[24] The part played by the two men in this affair is revealed in another unpublished letter of Hume's among the Abercairny Papers.

[25] Reprinted with an introduction by J. M. Keynes and P. Sraffa (Cambridge, 1938).

[26] See *Letters of David Hume,* ed. Thomas Murray (Edinburgh, 1841), pp. 72–73.

enough, in an incursion on the coast of France. A relation of Hume's by marriage, the General had immediately been taken with his personality at a chance meeting in London. In 1748 Hume accepted the position of aide-de-camp to St. Clair on a secret military embassy to the Courts of Vienna and Turin. During this period of miscellaneous employment, 1745–1749, Hume made his first attempt at writing English history and completed the revision of Book I of the *Treatise* into the *Philosophical Essays concerning Human Understanding,* later entitled the *Enquiry concerning Human Understanding,* which appeared at London in 1748, while he was still in Italy. Though containing the incendiary "Of Miracles," the work attracted little attention, and certainly no shock, until 1751. In 1751–1752 Hume's academic aspirations were dashed once again, this time at Glasgow University, where he stood candidate to succeed Hutcheson. Any resemblance between Hume's two efforts to win a professorship and to make money are quite beyond the comprehension of this twentieth-century professor!

In 1752 Hume was able to publish a volume of *Political Discourses,* the result of several years' labor. This, he acknowledges in *My Own Life,* was "the only work of mine, that was successful on the first Publication: It was well received abroad and at home." But the *Enquiry concerning the Principles of Morals* of 1751, the revision of Book III of the *Treatise,* had come "unnoticed and unobserved into the World." The unexpected offer in 1752 of the Keepership of the Advocates' Library at Edinburgh presented Hume, as has already been seen, with the long-wished-for collection of books and with sufficient time in which to prosecute the colossal undertaking of writing the *History of England.* Insofar as that was Tory history, it could hardly have been designed as a money-maker during a Whig age, nor could it have been aimed at government patronage at a time when all posts were in the hands of Whig ministers. It was simply English history as interpreted by David Hume, man of letters; and the work was totally unsuccessful until the appearance of the later volumes on earlier and less controversial periods. When Hume became more Tory at that time, he was but reflecting the contemporary political situation. Like many Scottish Whigs, he was driven to the opposing party in order to combat the anti-Scottish drive in England; his political principles, however, remained basically unchanged.[27]

[27] See E. C. Mossner, "Was Hume a Tory Historian? Facts and Reconsiderations," *Journal of the History of Ideas,* II (1941), 449–451.

There is no need to proceed in further detail with Hume's career. Lord Hertford's proffer in 1763 of the secretaryship of the English Embassy at Paris came from a man personally unknown to Hume. The Under-Secretaryship of State in 1767 came from Hertford's brother, General Conway. The external features of Hume's career were all named by chance and were all accepted by him out of the desire for a competency so as to be able to devote himself to the real career which he had never deserted since early youth, the life of letters. The present review may fittingly end, as it began, with Hume's own reading of his career: "Had I been born to a small estate in Scotland of a hundred a year, I shoud have remained at home all my Life, planted and improved my Fields, read my Book, and Wrote Philosophy. . . ." The plan of the career of man of letters he never altered; but the necessity of providing for a decent livelihood induced him to become, in turn, a tutor, a secretary, an aide-de-camp, a librarian, a diplomat, a statesman. When Hume finally retired to Scotland in 1769, he was well off financially and was able to devote his few remaining years to sociability and to final revisions of his publications. He died, according to Lord Monboddo's witticism, confessing, not his sins, but his Scotticisms. In the strictest interpretation, Hume died true to his ideals.

V

Hume's second motivation in the view of Professor Randall, "to gain a literary reputation," is not entirely disjunct from that of making money. Yet it warrants separate treatment because it involves the subsidiary charge of Hume's desertion of philosophy: "Since he couldn't shock men by a new theory of science, he would try politics and religion. . . . Philosophy was after all a rather narrow field; so he turned to history. . . ." To assert that Hume deserted philosophy for more popular fields is blindly to disregard the evidence. It is time to insist that Hume never deserted philosophy.

The *Treatise,* as it stands, is not a complete system of the sciences; yet it was originally designed as a complete system. Implied in the "Advertisement" to the *Treatise,* Hume's program was fully stated in *An Abstract of a Treatise of Human Nature.* The most important sentence is here italicized:

> Beside the satisfaction of being acquainted with what most nearly concerns us, it may be safely affirmed, that almost all the sciences are comprehended in the

science of human nature, and are dependent on it. The sole end of logic is to explain the principles and Operations of our reasoning faculty, and the nature of our ideas; morals and criticism regard our tastes and sentiments; and politics consider men as united in society, and dependent on each other. *This treatise therefore of human nature seems intended for a system of the sciences.* The author has finished what regards logic, and has laid the foundation of the other parts in his account of the passions.[28]

Hume's intention to continue the *Treatise* so as to form "a system of the sciences" was frustrated by the fact that the work was ignored by those minds that were in any way competent to deal with it and misunderstood by those that were not. Eager to correct his errors, Hume was understandably chagrined at being ignored. As early as March, 1740, he stated his sentiments concerning the reception of his work in a letter to Hutcheson:

I wish I cou'd discover more fully the particulars wherein I have fail'd. I admire so much the Candour I have observed in Mr. Locke, Yourself, & a very few more, that I woud be extremely ambitious of imitating it, by frankly confessing my Errors: If I do not imitate it, it must proceed neither from my being free from Errors, nor from want of Inclination; but from my real unaffected ignorance.[29]

And in 1754 Hume further confessed to Professor John Stewart of Edinburgh University, "I am willing to be instructed by the Public: tho' human Life is so short that I despair of ever seeing the decision."[30] Stung with the charge of unintelligibility, he took the blame entirely to himself. "Where a man of Sense mistakes my Meaning," he informed Stewart, "I own I am angry: But it is only at myself: For having exprest my Meaning so ill as to have given Occasion to the Mistake."

Since no first-rate mind had taken the pains to point out the mistakes of reasoning of the *Treatise,* Hume was driven to conclude that its major mistake was literary, that is, that it lay in the manner of presentation. This manner was described to Stewart in penitential language: "Above all, the positive Air, which prevails in that Book, & which may be imputed to the Ardor of Youth, so much displeases me, that I have not Patience to review it." Different organization and different style might have a different effect and were certainly worth the attempt. That the matter, however, as differentiated from the manner, was to remain the same, except for minor corrections, was made

[28] Hume, *Abstract,* p. 7.
[29] Hume, *Letters,* I, 39.
[30] *Ibid.,* I, 187.

perfectly clear in the same letter to Stewart: "But what Success the same Doctrines, better illustrated & exprest, may meet with, *Ad huc sub judice lis est.*"

Though the doctrines of the *Treatise* remained essentially unaltered in the two *Enquiries,* Hume deliberately omitted some part of the more technical philosophical analysis of the *Treatise.* This decision was presumably made because he had already presented that analysis, only to have it ignored, and because the omission gave him the better opportunity to restate his conclusions in simpler form and to emphasize their applications. Always alert to the social consequences of thought, Hume restored "Of Miracles" to its original context and, in subsequent publications, applied the principles of his "science of human nature" to the fields of economics, government, history, and religion. The relation of the two *Enquiries* to the *Treatise,* a subject that cannot be further explored here, is essentially one of simplification of form and of style.[31]

Hume's cultivation of style in the post-*Treatise* period has curiously irritated some modern philosophers. Little need be said on that subject, however, except perhaps to suggest that it is the rare philosopher who is also an artist. Plato was one; so was Berkeley; so is Santayana. The company is select but good, and Hume's place in it is unlikely to be disputed. Clearly it is no act of indecorum for a philosopher to attempt to present his thoughts in a comely manner, nor does there seem to be any legitimate reason to question his intellectual integrity therefor.

VI

The validity of the tradition of David Hume as the devoted inquirer into truth, no matter what the possible limits and defects of his inquiry, is firmly established in biographical fact. It is also well to recall that, within his lifetime, Hume was known by intimate friends and by congenial controversialists as *le bon David.* This is a matter of the interpretation of character and is relevant to the present thesis because the charge against Hume in the opposing tradition rests, as I have argued, on the misreading of character. In 1777 Adam Smith, who was closest to Hume in intellect and in spirit, gave the world the most famous portrait of *le bon David,* a portrait that the researches of the biographer

[31] The full relation has been recently studied by Professor Norman Kemp Smith, *The Philosophy of David Hume: A Critical Study of its Origins and Central Doctrines* (London, 1941), pp. 519–550.

have been able to substantiate but little to augment.[32] "Thus died," wrote Smith,

> our most excellent, and never-to-be-forgotten friend; concerning whose philosophical opinions men will no doubt judge variously, every one approving or condemning them according as they happen to coincide, or disagree with his own; but concerning whose character and conduct there can scarce be a difference of opinion....Upon the whole, I have always considered him, both in his lifetime, and since his death, as approaching as nearly to the idea of a perfectly wise and virtuous man, as perhaps the nature of human frailty will admit.

To Adam Smith there was no disparity between Hume the inquirer into truth and *le bon David,* between the philosopher and the man. The identity is still not impugned by any known matters of fact, nor perhaps has it ever been more felicitiously phrased than by Earl Marischal Keith, who wrote to Hume after the unhappy quarrel with Rousseau: "To the highflyers you are...a sad whig, to the whigs an hidden Jacobite, and to reasonable men *le bon David,* a Lover of truth."

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[32] See E. C. Mossner, *The Forgotten Hume: Le bon David* (New York, 1943). The following quotations from Smith and Keith are to be found in that book, pp. 208–209, 212.

FREGE AGAINST THE FORMALISTS (II):

A translation of part of *Grundgesetze der Arithmetik*
(Volume II, Sections 104–123)[1]

104 Let us now look at the manner in which Heine handles numbers. He writes:

> The main emphasis is to be put on the arithmetical operations, and the numerical sign must be so chosen, or equipped with such an apparatus, that it may ensure a support for the definitions of the operations.

An enigmatic utterance! If instead of the usual sign for three, I choose to write a capital "*U*," would this, perhaps, less adequately ensure a support for the definitions of the operations? And how can one tell when a sign will ensure such a support? And finally, what is one to understand by the apparatus with which a number sign is to be equipped? Where, for instance, has the sign "3" its apparatus? It might be supposed visible or even tangible, since the number itself is tangible according to Heine.

We notice here a difference between the theories of Heine and Thomae. For according to the latter, the arithmetical operations are already there and the new figures then stand, so to speak, in some kind of relation to them; while for Heine the figures are formed first and the operations, so to speak, are only subsequently defined. The latter method seems preferable; for how can I set up rules without mentioning the figures to which they refer?

Heine further writes:

> Rules according to which two numbers joined by the operator sign can be replaced by a single number are called arithmetical operations.

This is obviously expressed awkwardly. One might as well say: The rule according to which one makes socks from thread by means of knitting needles is called the knitting of socks. Heine wants to say:

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[1] [Translated by Max Black. Continued from pages 77–93 of the January, 1950, issue.—*Editor*]

"Arithmetical operations are substitutions, performed according to certain rules, of a single number in place of a group composed of two numbers separated by an operator sign."

One may add that the operator sign indicates which rule is to be used. Heine is thinking of a case such as that in which the group "3 + 5" is replaced by the sign "8." If in a sentence of meaningful arithmetic the group "3 + 5" occurs, we may substitute the sign "8" without changing the truth value, since both signs designate the same object, the same actual number, and therefore everything which is true of the object designated by "3 + 5" must also be true of the object designated by "8." And in many cases such a substitution will make for an advance in knowledge, because the senses of signs having the same denotation may be different, and then the propositions expressed by the two sentences will be different. The cognitive purpose, therefore, determines the rule that the group "3 + 5" may be replaced by the sign "8." This purpose requires the character of the rules to be such that if in accordance with them a sentence is derived from true sentences,[2] the new sentence will also be true. Whether the rules satisfy this condition can, of course, be determined only after the signs have been given denotations; for otherwise they cannot be used in sentences expressing true propositions. This is so for meaningful arithmetic; in formal arithmetic we have rules independent of a sense. They are not determined by the cognitive purpose but are arbitrarily established.

105 Heine continues:

> These rules are so determined that in the first instance, they yield the results of ordinary calculation when applied solely to the numbers 0, 1, 2, 3, ...etc.

This is not stated precisely; for the result of ordinary calculation — i.e., surely in meaningful arithmetic — is an actual number, not a numerical sign, and so not a number in Heine's terminology. Heine here borrows from an alien theory. He proceeds:

> The impossibility of subtraction in many cases occasions the introduction of new signs or numbers: for each sign *a* already given, one introduces a new sign *neg(a)*, extending the definitions of the operations appropriately so that they yield results on application to the new numbers and continue to yield the previous results on application to the earlier signs.

Several things must be asked here: First, what is to be understood by "the impossibility of subtraction"? Apparently it is to mean that

[2] More precisely: sentences expressing true propositions.

the rule is not always applicable, i.e., the rule according to which the result of subtraction is to be that sign which in meaningful arithmetic, limited to nonnegative integers, designates the difference. This rule says nothing about what number may be substituted for "3 − 5." But this does not necessitate the introduction of new signs. One might make the rule that "3 − 5," just like "5 − 3," should be replaceable by "2." Since the purpose of these rules is beyond the scope of our considerations, every rule is just as good as any other from our formal standpoint, so long as we avoid a contradiction between rules.

Further, it was said that the definitions of the operations are to be extended. Apparently this is to mean that the rules are to be supplemented.

Heine continues:

> It then appears that an appropriate definition of subtraction, *neg(a)* = 0 − *a* must hold.

Instead of "appropriate definition of subtraction," he should have said "appropriate stipulation of rules for interchange of figure groups of the form '*a* − *b*' with other figures." But we are quite unable to judge what is appropriate, since the purpose is unknown. We do not even know whether such interchange is necessary or whether we might not be satisfied simply with "3 − 5." We are not told how the modified rule is to run; and so a main point remains quite obscure. How can we learn the game, how understand its theory, if the rules are not even presented to us fully? Apparently we are being tacitly referred to our knowledge of meaningful arithmetic. But if we have a knowledge of meaningful arithmetic, we have no need of formal arithmetic.

Next consider the assertion that *neg(a)* = 0 − *a* must hold. This is incomprehensible. We have here a group of signs with which no proposition is connected; and consequently no assertion can be made. "*neg(a)*" is for us a mere figure and so are the equality sign, the subtraction sign, and the figure zero. Since Heine is here uttering an assertion he intends to express a proposition but himself probably doesn't know which. This is the predicament of formal arithmetic: it cannot help but make use of sentences supposed to express propositions, but nobody can determine exactly what these propositions are.

We ourselves use the equality sign to express that the denotation of the group of signs on the left-hand side coincides with the denotation of the group of signs on the right. This is not applicable here, since no

denotation is given. But we do not know what else the equality sign is to express. In any case, the signs on the left and on the right must still denote something and it is to be surmised that we have a theorem from the theory of the game, since no denotations of figures and no assertions can occur in the game itself.

106 We find something similar in Thomae. There we read:

These rules are contained in the formulas

$$a + a' = a' + a,\quad a + (a' + a'') = (a + a') + a'' = a + a' + a'',\quad (a' - a) + a = a'$$
$$aa' = a'a \qquad a(a'a'') = (aa')a'' = aa'a'' \qquad (a' : a)a = a'$$
$$a(a' + a'') = aa' + aa''.$$

This is a surprise. What would somebody say if, on asking for the rules of the game of chess, he received no answer — being shown instead a group of chessmen on the chessboard? He would probably say he could find no rules there, since he connects no meaning with the chessmen and their positions. The case only seems different here because we already know from meaningful arithmetic the plus sign, the equality sign, and the use of letters; but here we wish to practice formal arithmetic, and hence the question arises whether these signs are to be treated as signs after all or only as figures. In the latter case, it would be inconceivable that a rule could be given by means of the figures. But if they are to be treated as signs they cannot have the same denotation as in meaningful arithmetic; for if they did we would have a theorem of meaningful arithmetic and not a rule of formal arithmetic.

107 Although the exposition leaves us in the lurch here, we may still try to see what these formulas are supposed to mean; we may do so by asking what consequences the denotations of these signs in meaningful arithmetic have for the manipulation of the signs. Let us for the time being disregard the letters, which are clearly intended to make the rule general, and let us consider the formula

"$2 + \frac{1}{2} = \frac{1}{2} + 2$."

This says in meaningful arithmetic that the sum of 2 and ½ is the same as the sum of ½ and 2, or that $2 + \frac{1}{2}$ is the same number as $\frac{1}{2} + 2$. What follows for the signs? Clearly that a group of signs having the same shape as "$2 + \frac{1}{2}$" may always be replaced by one having the same shape as "$\frac{1}{2} + 2$," and vice versa. It is of course presupposed here that signs or groups of signs of similar shape always denote the

same. We have thus established the rule of formal arithmetic which corresponds to our theorem of meaningful arithmetic, and we may suppose that Thomae would express this rule by means of the formula "$2 + \frac{1}{2} = \frac{1}{2} + 2$." The formula "$a + a' = a' + a$" would then say according to Thomae: A group of figures consisting of one numerical figure to the left and one to the right of a plus sign may be replaced by a group of figures of the same kind in which the numerical figures have reversed their position relative to the plus sign. It would have to be stated in advance which figures are numerical figures.

Let us remember that the theory of the game must be distinguished from the game itself. It is true that the moves of the game are made in accordance with the rules; yet the rules are not objects of the game, but the foundation of the theory of the game. It is true that the moves of chess are made in accordance with rules; but no position of the chessmen and no move expresses a rule; for it is not at all the job of chessmen to express anything; they are, rather, to be moved in accordance with rules. So, if we regard formal arithmetic as a game, the formula "$a + a' = a' + a$," as expression of a rule of the game, is one of the foundations of the theory of the game, upon which inferences belonging to that theory can be based; but it is not anything which is changed in the course of the game, not an object of the game, comparable not with a configuration of chessmen, but rather with the verbal expression of a rule of chess.

108 Let us ask now what corresponds to a move in chess, what procedures are controlled by the rules of formal arithmetic. If we interpret the sense of Thomae's formulas cited above in the same way as we did in the case of the first formula, we find that each one permits one group of figures to be replaced by another group or by a single figure. We can best imagine this by thinking of the figures as written in chalk on a blackboard. We then, for instance, erase a group of figures of the same shape as "$2 + \frac{1}{2}$" and write one of the same shape as "$\frac{1}{2} + 2$" in its place. This procedure corresponds to a move of chess and is performed in accordance with a rule of formal arithmetic. From the standpoint of meaningful arithmetic it may seem trifling even to mention the chalk, the erasing, in short all this external activity; but let us not forget that the calculating game consists of just such external activity.

The erased group of figures will have been part of a larger group and our memory of meaningful arithmetic leads us to suppose that

the latter group of figures will be something which we call an equation or an inequation. So from the group shaped similarly to "$(2 + \frac{1}{2}).5 = 12 + \frac{1}{2}$," say, will arise a group shaped similarly to "$(\frac{1}{2} + 2).5 = 12 + \frac{1}{2}$." Each one of these corresponds to a position in chess. But we have already learned to recognize equations as expressions of rules. We therefore note that equations play a double role here; first, in the game itself, where, like configurations in a chess game, they express nothing; and secondly, in the theory of the game, where they must express the rules and also, we may suppose, deductions from these rules. Let us try to imagine the corresponding situation in the game of chess. In such a case the rules of the game would be expressed by means of groupings of chessmen, which might also occur in the game itself. General statements would then have to be supplied stating how the chess positions were to be understood as rules or theorems of the theory. In other words, some language would have to be given whose means of expression would be the chessmen and their positions on the chessboard. It might then happen that a position would need to be regarded in two ways: first, in the game itself, where it would express nothing, but would merely have arisen from an earlier position as a result of a move, and might change into another as a result of a further move; secondly, in the theory of the game, where it would be a theorem, and so have a meaning. An inference would then appear as a transition to a new position, and the rules in accordance with which such transitions would have to be performed would follow from the logical laws and from the manner in which the chessmen expressed meaning by means of their configuration. These rules, then, could not be stipulated arbitrarily and it would not be expected that they would coincide with the rules of the game of chess. The double role of pieces and the consequent double nature of rules, in the game itself and in its theory, would make insight into the situation so difficult that one would be inclined to think this double role had been purposely invented to cause as much confusion as possible.

109 Now we have such a double role of the figures in formal arithmetic. Here too we must first have rules for the manipulation of figures in the game itself, and these may be constructed arbitrarily with no consideration for any sense. Secondly, we must have rules according to which these same figures are handled in the theory of the game as signs; and these cannot be arbitrary, for they must take account of

the sense which the combinations of these signs express in the theory of the game. Now it is a great error not to distinguish between these two systems of rules, but to presuppose their identity without attempting to prove it. Rather, must it be supposed in the first instance that the rules of the game lose their validity as soon as the equations are regarded as theorems of the theory of the game and no longer as meaningless combinations of figures. The only radical way to bring light into this jungle is not to use the numerical figures and the operator signs (like "+," "=") in this double manner, but to allow them to appear only in the game itself, while expressing the rules and theorems of the theory of the game in the words of ordinary language. In the following discussions of formal arithmetic an equation is therefore not to express anything, not to have any sense, but is to be considered merely as a group of figures to be manipulated according to the rules of the game. What is called the equality sign in meaningful arithmetic is here only a figure denoting no relation.

We have seen that the rules in Thomae's inventory permit the substitution of one figure or group of figures for another. We can thus formulate them in words as we did in the case of the first rule. It seems still more suitable to let Thomae's equations stand as groups of figures from which the game starts, analogous to the initial configurations of the chessmen. Then they express no rules, have no sense whatsoever. We then stipulate the following rule: Given an equation and a formula containing as part a group of signs of the same shape as the group of signs on one side of the equality sign in that equation, it is permissible to substitute for this part of the formula a group of signs of the same shape as the group on the other side of the equality sign.

110 This rule gives permission to do something, as do the rules in chess, where nothing may be done which is not permitted by a rule. One can add rules concerning the interchangeability of letters with each other or with numerical figures. These rules also will permit something. This can really give nobody a liberty he did not previously have; these rules are not established in the name of reason or nature; it is merely that through them some actions become legitimate in the calculating game. There is no question here of truth, as there is in meaningful arithmetic; the arithmetical legislator may regard as legal whatever he wishes, and he is not restrained by considerations of the denotations of the figures, since officially they have none for him. The rules of for-

mal arithmetic, as patterns for action, are more closely related to the laws of etiquette than to the laws of meaningful arithmetic, which can be unrecognized but never broken.

111 When we compare Thomae's rules, or those we offer in their place, with the rules of chess, we notice that they apply to all numerical figures indifferently, while in chess different rules hold for pawns and knights. If there were no other rules in formal arithmetic, there would be no sense in using variously shaped numerical figures. If all rules concerning the figure two also applied to the figure three and vice versa, there would be no point in distinguishing these forms. If all chess pieces were treated like pawns, they could all be shaped like pawns.

Looking once more at meaningful arithmetic, we notice that though there are laws applicable to all numbers, it is by no means the case that everything that holds for one number also holds for another. On the contrary, every number differs essentially from every other and hence needs a special sign. If formal arithmetic is not to lose all connection with meaningful arithmetic and the manifold shapes of the numerical figures are not to be an unnecessary burden, the rules introduced by Thomae must be supplemented by others not applicable to all numerical figures, so that to each difference of shape shall correspond a difference in the rules. Such rules will be, for instance, that a group shaped like "1 + 1" may be replaced by a figure two, that a group shaped like "2 + 1" may be replaced by a figure three, that one may replace a group shaped like "1 − 1" by a figure zero, a group shaped like "½ + ½" by a figure one, etc. Since there is no settled boundary to the domain of the numerical figures, it would seem that the inventory of rules cannot be made definitive. In any case, we should note the striking incompleteness of Thomae's list.

112 When we considered the nature of formal subtraction above, we undertook to regard this operation also as the inverse of addition. Let us do so now. To subtract one figure from another will then mean to write down a third numerical figure, or group of figures, such that any figure group resulting from addition of this third group to the first figure in accordance with the rules of formal arithmetic will be replaceable by a figure of the same shape as the second. Here, addition is the manipulation described in the previous sections. For example, if a figure two is to be subtracted from a figure three, one can use one

of Thomae's rules, according to which a figure shaped like "(3 − 2) + 2" may be replaced by a figure three. Hence we see that every group of figures shaped like "3 − 2" is a solution to the problem. But not only solutions of this form are to be recognized, but also such as have shapes like "2 − 1", and "1", and very many others. It is true that this does not follow from Thomae's rules; but we have already seen them to be incomplete. We must presuppose rules according to which groups of figures like "(2 − 1) + 2" and "1 + 2" may also be replaced by a figure three. Accordingly, formal subtraction would be a multivalued operation, as mathematicians say, because the problem of subtraction would permit many solutions. In this respect there would be an essential deviation from meaningful arithmetic, where subtraction is single valued.[3] If in meaningful arithmetic 2 − 2 or 2 − 1 or 1 are offered as solutions of the subtraction problem, the denotation is meant, which is the same in each case. If one writes figure ones or groups shaped like "2 − 1" on different parts of a blackboard, these all have the same denotation; and despite the difference in location and shape of the signs, there is in meaningful arithmetic just one solution. But here in the arithmetical game the figures and groups of figures themselves are solutions and since they differ in location and shape we have many solutions.

One might try to avoid this conclusion by appealing to Thomae's formal denotation of number figures. One might say: Because all these figures and groups, presented as solutions, are manipulated according to the same rules, they have the same formal denotation; and that formal denotation is the actual solution. Against this we may object:

(1) The formal denotation, as explained above, cannot be identified.

(2) This formal denotation, if admissible, would be the same for all numerical figures, at least on the supposition that the rules are Thomae's, which hold indifferently for all numerical figures.

(3) No further calculation with the products of subtraction would be possible, since rules of calculation apply to numerical figures and not to their problematic formal denotation. In chess we move the chessmen themselves, not a certain something common, say, to all black pawns.

[3] Of course this formal subtraction really corresponds in name only with subtraction in meaningful arithmetic; and the true situation would be clearer if this apparent agreement were avoided by choice of a different word.

What has been said about subtraction is also essentially applicable to division.

113 Now Thomae comments at the end of No. 2, concerning the arithmetic of integers:

> It proves the uniqueness (consistency) of the four basic operations, for all numbers except zero — upon which only addition, subtraction, and multiplication but not division can be performed uniquely (that is, consistently). A quotient whose denominator is 0 has no meaning, and zero occupies a singular position among the numbers.

The arithmetic which proves this must be meaningful, so that nothing is gained for formal arithmetic; for addition, multiplication, subtraction, division in meaningful arithmetic are quite different from the operations bearing the same names in formal arithmetic. The uniqueness of the former is not present in the latter. And there is no reason here for according the figure zeros any special position. At least in Thomae's set of rules the figure zeros are not mentioned particularly, and all numerical figures are treated in exactly the same manner. There is no reason why the group of figures "2 : 0" or "2/0" might not be the answer to a division problem just as well as "2 : 3" or "2/3." In the sentence "A quotient whose denominator is zero has no meaning," groups of figures like the ones above are apparently called quotients.[4] Lack of meaning is no reason for formal arithmetic not to make use of such groups; for it is anyhow not concerned with meaning, and this unconcern is the very reason why it is preferred to meaningful arithmetic. For formal arithmetic, "2/3" has no more meaning than "2/0", and both groups can be manipulated according to rules equally well.[5]

What does Thomae really want to say when he denies that a quotient with denominator zero has meaning? Presumably that a group of figures in which a figure zero appears to the right of a colon, or under a division bar, is not permitted. Are we to understand only that the rules of the game do not give permission for such a construction? Or that they expressly forbid it? In the first cases we would have a theorem from the theory of the game, analogous, for instance, to the

[4] If the quotient were itself a meaning, one could hardly be talking about its meaning.

[5] Formal arithmetic does not seem true to itself here. In fact it sometimes appears as though formal arithmetic is really meaningful arithmetic, which, for the sake of avoiding inconvenient questions, tries to pretend it is formal, without, however, quite bringing it off.

theorem of chess that a bishop standing on a white square cannot land on a black square. There is no prohibition to that effect, but the freedom of movement granted the piece by the rules is not sufficient to accomplish the manoeuver. But Thomae did give us a rule allowing the appearance of such groups of figures as have here been declared illegitimate. According to this rule it is permissible to substitutute for a figure two of the group of figures "(2:0).0." Therefore, if it is permissible to write a figure two, it is, according to this rule, also permissible to write one shaped like "2:0." If this is nevertheless to be illegitimate, it is not a consequence of one of the rules so far introduced, but needs a prohibition; and our sentence, "A quotient whose denominator is zero has no meaning," must then be interpreted either as a prohibitory rule or as a theorem from the theory of the game. If it is the latter, it is a consequence of the rules. Amongst these there must then be at least one prohibitory rule, because no prohibition restricting a permissive rule can follow from a set of exclusively permissive rules. In any case, there must be at least one prohibitory rule in addition to permissive rules. As in the case of all rules, no reason can be given for such a prohibition except the will of the lawgiver.

114 Another question arises here: Are such groups of figures as "2:(1 − 1)," "2:(2 − 2)," "2:(6 − 2.3)" admissible? Obviously Thomae would deny this. But, it will be objected, this is obvious; 1 − 1 is zero, and so are 2 − 2, and 6 − 2.3. It is true that in meaningful arithmetic "1 − 1," "2 − 2," and "6 − 2.3" mean the same as the sign "0"; but let us not forget that we are considering formal arithmetic! We are concerned here with the groups of figures themselves and not with their denotations; and it cannot be denied that they differ amongst themselves, and with respect to the figure zero, not only as two pawns of the same color in chess differ, but also in the manner of different chessmen, say knight and bishop. Now groups of figures shaped like "1 − 1," and "2 − 2," etc., may be replaced by figure zeros. This is not stated in Thomae's rules; but we have already seen that they are incomplete. Yet this is no reason for not permitting such groups as "2:(1 − 1)." However, it is true that an inconsistency in the rules would appear; for one would obtain an illegitimate group on trying to replace a group shaped like "1 − 1" by a figure zero. We might here assume a limitation imposed upon the rule of substitu-

tion, by means of the prohibitory rules. But clearly Thomae also wants to prohibit groups shaped like "$2:(1-1)$."[6]

Interpreting Thomae's sentence, "A quotient whose denominator is zero has no meaning," as a prohibitory rule, we shall state it better as follows:

"It is forbidden to form groups of figures in which a figure zero, or a group of figures replaceable by a figure zero according to any rule of formal arithmetic, appears to the right of the division sign."

115 Uncertainty results upon attempted application of this rule (or theorem from the theory of the calculating game); for it must be known which groups of figures can be directly or indirectly replaced by a figure zero; and this question cannot be answered with certainty before all the rules of the game have been formulated. And now the question is whether a complete inventory of rules can be given. Antecedently all admissible classes of figures must have been introduced. If replacement of a certain group of figures by a figure zero does not seem possible according to an incomplete set of rules, it may be made possible by a rule yet to be added, so that an admissible group of figures might become inadmissible because of later rules; and on the other hand, if some rules permit the substitution, it is possible that a later prohibitory rule will cancel the permission.

To be safe, one would have to formulate the principle that all prohibitory rules shall have stronger force than the permissive and at least assemble all rules forbidding the replacement of a figure or group of figures by zero, so that every such replacement not explicitly forbidden would be permitted; or, conversely, one would have to assemble all the rules permitting such a replacement. Both would be difficult to accomplish, because of the tremendous variety of figures and groups of figures. But until this is done our rule is incomplete and therefore inapplicable.

116 The insufficiency of Thomae's inventory of rules appears again in another connection. For nowhere do they state how one can replace a group of figures consisting of two number figures separated by a subtraction sign. Consequently it is not possible, according to these rules, to replace a group like "$(3+2)-2$" by a figure three, either directly or indirectly. Let us recall how the corresponding theorem is

[6] The zero figures therefore are not in a singular position in formal arithmetic.

proved in meaningful arithmetic. There, something like the following may be said:

According to definition, $(3 + 2) - 2$ is the number which, increased by 2, yields $3 + 2$. This number is 3; therefore $(3 + 2) - 2$ coincides with 3.

In this argument the uniqueness of subtraction, which, as we have seen, does not hold in formal arithmetic, is essential. Furthermore it is essential that the group of symbols "$(3 + 2) - 2$" has a denotation which can be referred to by the definite article ("*the* number which"), and with the demonstrative pronoun ("*this* number"). This also does not apply in the calculating game. One cannot talk here of definitions; for here the minus line is not a sign of subtraction: it has no denotation whatsoever; in place of a definition there are rules for the manipulation of this line; and the very rule which would be of use to us is lacking. Therefore, according to Thomae's rules we are not in a position to transform a figure like "$((3 + 2) - 2) - 3$" into one like "$3 - 3$." Accordingly we could regard the group "$2:[((3 + 2) - 2) - 3]$" as permitted.

According to Thomae's rules it is also not possible to replace the figure group "$(3.2) : 2$" by a figure three; for there is no rule allowing a group of figures consisting of two number figures separated by a colon to be replaced by something else.

We shall attempt to correct this insufficiency, not by formulating a new rule, but by using the rule stated at the end of #109, and adding to Thomae's formulas the following two: "$(a + a') - a' = a$" and "$(a.a') : a' = a$." These too are now groups of figures from which the game starts. There is presupposed here, as elsewhere, a rule stating how letters may be replaced by numerical figures.

117 If we had neglected the prohibition formulated above (#114), we could have started with the figure group "$3.0 = 0$" and used the figure group "$(3.0) :0 = 3$," obtained by substituting the appropriate numerical figures in the second of our two new formulas, to obtain the group "$0.0 = 3$"; similarly we could construct "$0.0 = 4$." And this may be the reason for Thomae's assertion that division cannot always be performed uniquely, that is, consistently.[7] But here, in formal arithmetic, there is no immediate contradiction. Why should such a

[7] The words "that is" are remarkable here, since the extraction of a square root cannot in general be performed uniquely, though no contradiction results.

group as "3 = 4" not be permitted? In meaningful arithmetic it may not appear as a valid formula, because the different denotations of the numerical signs must be considered. This reason is irrelevant here. Till now at least no prohibition has been issued against writing a figure group like "3 = 4." Only when such a prohibition is issued will there arise a contradiction or, better, disagreement among the rules, some of which permit, and some of which prohibit.

118 Now Thomae says in #2, immediately after his list of rules:

> Subtraction and division become addition and multiplication through the introduction of the new numbers. Since all arithmetic is composed of these *four*, or if one prefers, *two*, operations, new arithmetical structures will be consistent, if they are consistent with respect to the four (or two) basic operations.

It is hard to understand this declaration. In the first place, we may doubt that all arithmetic is composed of the operations mentioned. The taking of limits, at any rate, does not seem reducible to these operations. Incidentally, to make such a declaration one would have to know the whole of arithmetic, which is impossible, since this science has not been completed and probably never will be.

Furthermore, it is remarkable that consistency is predicated of a figure. It would sound strange if someone suspected a chessman of harboring a contradiction. But calling to mind Thomae's mode of expression, according to which the circumstance that rules treat, amongst other things, of a particular figure appears as behavior of this figure with respect to the rules, and according to which again this behavior is called the content of the figure, we see that a contradiction prevailing among the rules of chess would appear to be transferred to the interior of a chessman. To reach any understanding we will have to transfer the contradiction back again to the rules.

119 Furthermore, we must ask what is to be understood by a contradiction with respect to the basic operations. No doubt Thomae's statement discussed above, asserting that division by zero cannot be consistently performed, should be considered here. According to this, it must be supposed that Thomae regards a figure as inconsistent with respect to an operation when this operation cannot be consistently performed upon this figure. Accordingly, the zero figures would not be consistent with respect to division, and therefore not consistent in arithmetic generally.

Such a contradiction can arise only when the rules applying to a

particular class of figures contradict the general rules applying to all numerical figures. Since all of the latter are, according to Thomae's list, permissive, a contradiction has to be feared only if among the particular rules, treating of one class of figures, there also occur prohibitions. This, in fact, occurs with zero figures. But it also occurs elsewhere. For whenever a new class of figures is introduced, it will be necessary to stipulate that these figures may not occur on the left side of an equation whose right side is a zero figure. For instance, consider the introduction of the class of figures shaped like "$\sqrt{2}$." If we do not know whether we may form the group "$2:\sqrt{2}$," we therefore do not know whether we may replace a figure two by a group like "$(2:\sqrt{2}):\sqrt{2}$." It does not help if many attempts at constructing an equation like "$0 = \sqrt{2}$," according to the general rules and the particular rules for figures shaped like "$\sqrt{2}$," have failed; for many unsuccessful attempts do not prove impossibility, especially when the attempts are not based on a complete list of rules. Similarly, figure groups like "$0 = 1 - \sqrt{2}$," and countless others, would have to be prohibited.

Whether all these prohibitory rules could be stated as a single rule, or as a small number of rules, is not our concern here. In any case, among the particular rules about figures shaped like "$\sqrt{2}$," prohibitory rules occur and their consistency with the general rules cannot be inferred from the mutual concord of the latter. Every class of figures to be introduced will require particular rules, including prohibitions. For if exactly the same rules should hold for the new figures as for some class already in use, there would be no reason for choosing a special shape. For instance, if exactly the same rules were to apply to the figures shaped like "i" as apply to the figure ones, they would be superfluous. But if the rules differ in part, mutual agreement of the rules dealing with the figure ones does not guarantee the same with regard to the figures shaped like "i."

The assertion that formal arithmetic permits of a completely consistent foundation accordingly lacks proof; on the contrary, its truth is subject to grave doubts. Thomae's contrary opinion rests on the mistaken supposition that the rules given in his second paragraph constitute a complete list and especially on his complete unawareness of the prohibitory rules which each new class of figures necessarily requires.

120 Thomae continues:

> Since the further development of the concept of number, in any case, demands at some point the formal viewpoint free of relationships to sensible objects, we decide to adopt this viewpoint already for negative numbers and fractions.

This presupposes that every conception of numbers in which the numbers are not related to sensible objects is a formal conception in Thomae's sense or, expressed conversely, that every meaningful arithmetic relates the numbers to sensible objects. This is an error. In our first volume, nothing could have been further from our mind than treating numerical signs as figures and calling these figures numbers; yet nothing could have been further from our mind also than grounding arithmetic on sense perceptions and calling heaps of sensible things numbers. By the number zero we do not mean a certain round figure; for the latter is only a sign for that which we mean to recognize as exisiting, although neither a physical body nor a property of such a body. So, however much we agree that arithmetic must beware of any reference to sensible things and that the numerical signs accordingly denote nothing sensible, we equally emphasize that these signs are not therefore without denotation and we decline to call the signs themselves numbers.

121 We turn now to #3 of Thomae's exposition. There we read:

> The rational numbers may be ordered in a series or they may be subsumed under the concept of quantity. It is the case that $3 > 2$ and $3 > -4$ and $9 : 10 > 8.9$, because in $9 : 10 = 81 : 90$ the numerator is greater than the numerator 80 in $80 : 90 = 8 : 9$, whereas the denominators are the same.

It is striking that order in a series and subsumption under the concept of quantity are here treated as the same. Is a book therefore a quantity because it can be ordered in a series with other books? Is the manner of ordering of no importance? If so, then everything would actually be quantity, e.g., the strokes of a clock, the letters of the word "quantity." We can also order chess pieces in a series; does this make them quantities? One might rather think that the recognition of things as quantities precedes the ordering of them in series and supplies the principle of the order.

In other cases, if things are arranged in series, each thing has at least one neighbor. That seems not to be the case here. This whole passage can only be understood if meaningful arithmetic is known; and then formal arithmetic is superfluous. If we adopt Thomae's

formal standpoint, we have no indication of how the numerical figures are to be ordered. Certainly the sign ">" seems to be intended to serve this purpose, but we do not know its denotation. The idea of formal arithmetic requires us to conceive it as a figure which — in the calculating game, at any rate — has no denotation, but is to be manipulated according to given rules. Nevertheless, such rules are here altogether absent; and this formal conception is self-defeating since " $3 > 2$" occurs as a component of the declarative sentence "It is the case that $3 > 2$." It follows that there should be a proposition connected with it. Consequently "$3 > 2$" is not something comparable to a chess position, i.e., something to be transformed in the calculating game. On the contrary, it is a sentence from the theory of the game. For reasons which were developed previously (#109), we reject the use of numerical signs here and attempt to express the content in words, in some such way as:

"Each figure three is greater than any figure two,"

where we have ventured to insert the words "each" and "any." The meaning of the words "greater than" remains to be determined. At any rate, they are not to be taken in a geometrical sense, nor in the sense of meaningful arithmetic; for in the latter we have a relation between numbers themselves, the denotations of numerical signs — denotations which are not available for formal arithmetic. We do not learn from Thomae the sense of the sentence,

"The numerical figure *a* is greater than the numerical figure *b*."

We can only surmise that it treats of a relation by means of which the numerical figures are ordered in a series. The nature of this relation and its connection with the rules of the game remain obscure.

122 Thomae's statement to the effect that zero forms the limit of a positive number which becomes smaller and smaller is unintelligible from the formal point of view. So a numerical figure changes in the course of the game? Of its own accord? In some property essential to its manipulation in the game? Also unintelligible are the statements to the effect that there is no smallest positive number and that a rational number which is not negative but smaller than any specifiable positive number is necessarily zero. Which zero? There are many zero figures. Is "$1 - 1$" a zero figure? Immediately there follows the statement:

"In this important statement a number, the number zero, is recognized by means of a negative criterion."

The number zero? Which one? "Zero" is here treated as a proper name. That is correct in meaningful arithmetic, false in formal arithmetic. What is a rational numerical figure in the latter? What is a positive numerical figure? A negative numerical figure? The statements cited above will belong to the theory of the game and follow from the rules of the game. How they do so, and from which rules they follow remains obscure. The words "rational," "positive," "negative" designate properties of numerical signs which need consideration in the application of the rules, as do "white" and "black" in chess. Small and accidental differences in the form or the color of the figures — of which the rules do not treat — need no consideration in the theory of the game. We now ask: How do the rules run which do take account of the previously mentioned properties of figures? Which rules make a distinction between positive and negative numerical figures, between rational and irrational? No answer! We see indeed that the formal arithmetician again steps out of his role at this point. The formal conception is a shield held up so long as questions about the denotation of the signs threaten. This danger over, the shield is allowed to fall; for it was always a burden.

123 Thomae thinks one can proceed from a given number to even larger and larger numbers, because nothing sets a limit to new constructions by means of addition. Certainly, there is a limit to new constructions, just as to the growth of a city. We have neither an infinite surface nor infinitely many pieces of chalk at our disposal. Numerical figures are diagrams created by writing. An immaterial nonspatial numerical figure is like a castle in the air — but even air castles are subject to limits. Fantasy lends wings — but even these become exhausted at last.

It may be doubted whether a new construction of numerical figures by means of addition ever occurs. Groups composed of numerical figures and addition signs may so arise, but, since it is nowhere said what a numerical figure is, it remains dubious whether such groups are to be regarded as instances of numerical figures.

We notice that, as in the case of zero, Thomae sees danger of contradiction in the case of the infinite. The rules he himself introduces are all permissive and thus cannot enter into conflict with each other;

figures may be freely manipulated in accordance with them, and whether a figure eight stands upright or lies on its side is a matter of indifference so long as there is no special rule applying to the latter case. But here no such rule has yet been introduced.

The infinite is here explicitly called a concept — with no indication of a reason. Why is it not simply a figure? The actual infinite, which G. Cantor rightly defends, is at any rate no figure, and ought to have no place at all in formal arithmetic.

[*To be concluded*]

DISCUSSION

IS THERE A THIRD KIND OF KNOWLEDGE?

In this paper I wish to raise the question whether there may not be a third kind of knowledge. And I wish to illustrate the importance of the question by an examination of some views expressed in Professor C. I. Lewis' much discussed volume entitled *An Analysis of Knowledge and Valuation.* I choose this work because of the care with which it is written and its magnificent scope; but I might as well have used for illustration almost anyone of the other up-to-date writers belonging to the so-called empiricist school.

Readers of Mr. Lewis' book will recall that he distinguishes two kinds of knowledge, analytic and empirical. Analytic knowledge is embodied in statements "such as can be assured, finally, on grounds which include nothing beyond our accepted definitions and the principles of logic. And statements belonging to logic are themselves analytic; hence capable of being certified from the definitive meanings of the constant terms constituent in them and the syntactic relations of these which they express" (p. 96). Their truth is "independent of any and every empirical fact" and it holds "not only of what happens to be the case in actuality, but of all things thinkable and in all conceivable circumstances." For example, "that S is P or S is not P... holds for any S and P which the most untrammeled imagination could conjure up, provided only the imagining be self-consistent" (p. 123); so also would "All biped birds are bipeds" (p. 125). Analytic knowledge is said to be the only kind of a priori knowledge.

The second kind of knowledge, the empirical, is expressed in statements that can be determined to be true only by experience. These are themselves of two sorts : terminating and nonterminating. The former are predictions of what kind of experience I shall have under specifiable circumstances of action. For example, "If I now turn my head to the right, my visual field will shift to the left" is a terminating judgment because it will be confirmed or disconfirmed once and for all by the experience I shall have after I turn my head. Nonterminating judgments, on the other hand, are such as can never be verified or refuted by a single or by a finite number of experiences, for example, the

judgment "A piece of white paper is here before me." Although this statement can be rendered more and more probable by experimental tests, it is asserted that, no matter how many tests I may make, it will always remain subject to the possibility of error and therefore of revision. If perhaps one were to object that statements of this kind should not be included under knowledge, since one can never *know* that they are true, Lewis' answer would be that I can at least *know* that they are more and more probable, as the confirming tests increase in number and consilience. This knowledge, he says (and here *nota bene*), is not itself merely probable but certain, so that an infinite regress is avoided. Obviously, nonterminating judgments rest on terminating judgments, for any test of the truth of the former kind is the prediction of a sort of experience which I either will have or not have. The mere reporting of an experience had here and now Lewis refuses to rate as knowledge, since it is not capable of error (pp. 182–183). (Why such analytic statements as "Biped birds are biped" should nevertheless be included under knowledge is hard to see. Are they any more subject to error than "I now have a headache"?)

The significance of nonterminating statements is that they reveal to us the objective world. Just how they do this is not made very clear. Their content is always some sort of experience to be expected, and in more than one place (e.g., pp. 232 and 226) Lewis seems to argue that there is no meaning to objectivity other than a valid set of nonterminating statements (p. 192, 226, 232). Yet he disclaims any sort of pure Berkeleian or phenomenalistic theory which would identify objectivity with the validity of these judgments (p. 187 n.). His view, he says, would be consistent with the supposition that the verificatory data are parts of, or ingredients in, the thing judged. A nightmare might, he allows, be an ingredient in mince pie, and an elliptic shape an ingredient in a penny. To quote him:

> The hiatus implied in the view here presented between immediate sense presentation and objective reality thus evidenced, is not the denial that the content of presentation may be "numerically identical" with a part or aspect of the objective reality, but the denial that it is ever the whole of the objective reality believed in, or that it is ever unambiguously decisive of the statement of an objective property or existence of a specific objective thing or event (p. 187).

The reason given why the implications of an objective reality are interminable and why therefore there can never be certainty but only increasingly high probability attachable to a judgment of empirical reality is that the effects of any empirical fact or event are themselves interminable: "There will never be a time when the fact or non-fact

of this piece of paper now lying on my desk will not make some trivial difference" (p. 176). Hence no matter how often I experience the expected implications of its being white paper, in the one case, or not being white paper in the other case, there may be somewhere in the future an effect incompatible with its being white paper, or not being white paper, as the case may be. That it is the one or the other can be, therefore, no more than probable, although increasingly probable. The question comes down to whether the supposition of its not being white paper makes the verifiable experiences more or less probable. "My experience at this moment, for example, justifies my belief in a piece of white paper before me as probable in the degree in which it is improbable that I should have just this present given content of experience if there were *not* such a piece of paper here" (p. 190).

I have now I hope given a fair and accurate, if brief, account, largely in Lewis' own words, of the two kinds of knowledge which he recognizes. I wish to emphasize that for him, and I suspect for most thinkers who call themselves positivists, these are the only kinds of knowledge. In some ways, to be sure, Lewis' formulations are unique and would not coincide with those of other empiricists, but in general, I believe, there would be essential agreement between him and them. I wish next to try to show that Lewis himself, directly or by implication, assumes the existence of a third kind of knowledge — a kind that cannot be included as a species in either of the two kinds recognized. Its existence is revealed in Lewis' discussion of the topics: (1) objective reality; (2) probability; and (3) memory.

The issue with regard to objective reality is somewhat complicated and obscured by the importance attached by Lewis to contrary-to-fact conditionals. He goes so far as to assert (pp. 226–227) that to believe that anything is real means believing certain statements of the form "If such and such experiments be made, so and so will be experienced," where the if-then relation must be interpreted in a fashion to make it true that if certain experiments *had been made,* certain experiences *would have* followed, even though the experiments were never made. One must not forget, however, that the implication here is probable, not certain, and that while each verification, if made, is a terminating judgment, the affirmation of the connection between antecedent and consequent is a nonterminating judgment; theoretically, an infinite number of terminating confirming judgments would have to be instituted in order to make the implication certain.

The importance attached to the contrary-to-fact conditional does not, nevertheless, alter decisively the point upon which I wish to insist,

namely, that, unless there is another way of knowing objective reality besides those specified by Lewis, we can never know it at all. For unless objective reality is somehow disclosed in *any* sensible experience, it cannot be rendered even probable by any number of verificatory terminal judgments as to *mere* future experience or by the acceptance of contrary-to-fact conditionals, the evidence for which always rests upon the former. All these judgments, as is emphasized time and time again by Lewis, have their starting point in given experience and terminate either in an experience that will be given or would have been given under conditions for experience not realized. Their topic is sensible experience and nothing but sensible experience; and no amount of repetition of such experiences will ever yield any certitude or probability of anything transcending sensible experience, or even any notion of such a reality, unless this notion, certitude, or probability is somewhere given in one of them. They may express laws regarding experience to be given or experience possible, but nothing more. When, as a test of this really being a white sheet of paper before me, Lewis invites me to ask myself whether it would be less probable for me to have this experience if the paper were not there, the answer is that, in terms of the analysis of experience offered, the question is meaningless. In terms of this analysis, there being a real white sheet of paper or there not being one can make no difference at all to the experience, rendering it neither more nor less probable.

But might one not object that this is, in fact, the principle involved in testing a physical hypothesis, say the Bohr theory of the atom? Would it not be less probable that we do not and more probable that we do have the experiences of certain bands of spectral lines if there are atoms composed of electrons moving in planetary fashion around protons? The answer is, No, not one whit more or less probable as the case may be unless there is initial probability that any datum of sensory content is under the control of some entity not given in experience. It is because this initial probability — nay, certainty — is assumed by the physicist that one physical hypothesis is thought to be more plausible than another. The fact is, of course, that no refinement of logical technique can disguise the inadequacy of the phenomenalist analysis of our experience of things, which is always an experience of something *an sich,* not merely *für uns.* That is why even when we are alone in the personal-social sense, we can still feel ourselves companioned by the pebbles on the strand or the stars in the sky, or even by the chairs and tables in our study — beings pulsing with a reality of their own, at once hidden from us yet revealed to us by their sensible

effects. And we know this not as probable but as certain because each sensible experience or datum is a triadic relationship, the meeting point of our own passivity and the activity of the not-self — something given to us by something else. To quote Lewis himself in corroboration, "The foundation stones which must support the whole edifice (of knowledge) are still those items of truth which are disclosed in given experience" (p. 353).

The second instance where some third kind of knowledge appears on the scenery of Mr. Lewis' epistemology is in his discussion of probability. In general Lewis adopts an a priori rather than an empirical theory of probability, but with modifications. In the first place, he adds a new dimension to the probability judgment, which he calls "reliability"; and, in the second place, he insists that, when probability judgments are applied to facts, they become more than purely hypothetical; that is to say, it becomes true that they are probable. Resting now on empirically ascertainable data, they can be asserted as true. On the bottom of page 305 he sums up his view as follows:

> Thus the full statement of a probability judgment should be of the form, "That c, having the property Ψ will also have the property Φ is credible on data D, with expectation a/b and reliability R." If in fact the data "D" give this estimate, "a/b," of the frequency of instances of Φ among instances of Ψ, and if the adequacy and uniformity of the data and their proximateness to the case in point, indicate reliability in degree "R" of this determination, then this probability judgment will be *valid*. And since reliability as well as correctness of the frequency estimate depends only upon the data, in relation to the case in point, and upon correct principles of judgment, a probability statement which is *valid* is *true*, when its data, "D", are true, and in any case is assertable in whatever sense its premised data are assertable.

This being the concept of probability accepted, the question I wish to raise is this: Is a true probability statement an instance of a priori knowledge or is it an instance of empirical knowledge and therefore a statement either of the terminating or the nonterminating variety? That it cannot be an example of a priori knowledge in Lewis' sense, since such knowledge is analytic, seems clear. No amount of logical legerdemain will allow one to deduce analytically from the fact that a/b instances of Ψ have been instances of Φ — even if all the rules of reliability have been religiously adhered to — that c, an instance of Ψ will be an instance of Φ, or will probably be an instance of Φ. You can no more get from the mere fact of the connection of Ψ and Φ in the past to the probability of that connection in the future than you can get its certainty. The new way of exchanging probability for cer-

tainty in judgments of induction does not affect the "principle of the thing." This seems to be admitted by Lewis himself when he writes,

> For one who should lack a primordial sense of probable events, every attempted explanation of a categorical probability statement must fail. Anyone who should perversely insist upon reduction of its meaning to terms of some presently ascertainable factuality — other than the data giving rise to it — must simply be left behind in the discussion. He denies a category of cognition which is fundamental and as different from certain knowledge as apprehension of the future is different from observation of the past (p. 320).

Let us next see if a categorical judgment of probability is an empirical judgment. First, is it of the terminating variety? Since it is a probability judgment it cannot be a terminating judgment; for even if c in a given case does turn out to be Φ, its probability would not be affected, for its probability was already fixed at the outset by the data. On the other hand, if c does not turn out to Φ, the judgment will not be refuted, since all that was asserted was that it would probably be Φ. Is it then a nonterminating judgment? But it cannot be that, for if it were it would be only probable; but for Lewis, a categorical probability judgment is not just probable; it is true. And, of course, Lewis always insists that the judgment of probability is not empirical, but on the given data, D, a priori (p. 290).

It may be suggested that a judgment of probability is a synthetic judgment a priori. But with regard to the possibility of synthetic judgments a priori, Lewis writes, " It would hardly be desirable to enter at length upon that question here; it is a dead, or nearly dead issue; conviction that all a priori truth is analytic being now quite general" (p. 158). So, if a probability judgment is known to be true, and if it is neither a case of a priori nor of empirical knowledge, must it not be an example of some third type of knowledge? And does not Lewis himself admit as much in the quotation cited above?

The impasse into which one gets oneself on the two kinds of knowledge theory is perhaps most impressively illustrated by Lewis' discussion of memory and the coherence theory of truth or, as he would call it, the congruence theory of truth.

The problem of memory as a source of knowledge is well put by Lewis. "The assumption of certainty for memory in general would be contradicted by the fact that we remember remembering things and later finding them to be false. And memory in general being thus fallible, the claim of certainty for any particular memory, or class of them, becomes dubious" (p. 334). The solution of the problem proposed by Lewis involves accepting two theses: (a) "Whatever is remembered is prima facie credible because so remembered"; (b)

"When the whole range of empirical beliefs is taken into account, all of them more or less dependent upon memorial knowledge, we find that those which are most credible can be assured by their mutual support, or as we shall put it by their *congruence.*" Congruence itself is defined as follows: *"A set of statements or a set of supposed facts asserted, will be said to be congruent if and only if they are so related that the antecedent probability of any one of them will be increased if the remainder of the set can be assumed as given premises"* (p. 338).

Well, what kind of knowledge is this? How do I know the prima facie reliability of memory? Is it an analytic a priori judgment? Can I know from the mere statement "Memory has prima facie validity" that it has validity? Is it self-inconsistent to deny this? Not obviously. Is it perhaps a terminating empirical judgment? In order to answer this question we must inquire more narrowly into just what it asserts. It appears to be a probability judgment of the form "What I remember to have been a fact probably was a fact." But since this is a judgment of probability, it cannot be refuted or confirmed by a single experience. If it turns out to be false, it might still have been probable; and if it was probable to start with, the fact that it is verified does not affect its initial probability. Is it then a nonterminating judgment, one which through increasing evidence becomes more and more probable? But although the judgment may indeed thus gain in probability, that it had *initial probability* cannot be affected by any amount of confirmation. That memory has initial probability is therefore neither an a priori nor an empirical proposition, either terminating or nonterminating, in Lewis's sense. Again we come upon a seeming *third kind* of knowledge.

We come upon it still again when we examine Lewis' principle of congruence, in accordance with which the initial probability of a judgment may be increased. Lewis believes that his statement is more accurate than the familiar consistency principle for the testing of statements, and with that I personally have no quarrel. We must, however, examine the reason given for accepting it and ask ourselves the usual question as to what kind of knowledge the knowledge of this principle is. But here we get little or no enlightenment from Lewis. He never ventures to call it a priori, which on his definition of the a priori it obviously cannot be; and of course it would not be a terminating judgment. It might appear to be nonterminating, justifying itself increasingly as we find it confirmed again and again when we put memories to the test in accordance with it, yet never absolutely verified as certain. But if this were true, our confidence in any tested memory would

be no better justified than whatever justification can be gotten out of one probability leaning on another, like the strength secured by one weak man supporting himself on another weak man. The most that comes out, as far as I can interpret the discussion, is that "indeed it is totally implausible that the whole of the truth should fail to have such systematic structure" (p. 342). Now what manner of knowledge is this?

Yet even if we did know that the principle was sound, Lewis perceives that such knowledge would not enable us to know any concrete items of fact. Such facts are given by memory and memory alone, the sole source of our data in the end. Hence, the initial plausibility of single memories provides the stones out of which the Empire State Building of our knowledge is constructed. Since Lewis returns to this matter at the end of his discussion of knowledge and tries to offer a final justification of it, let us conclude our estimate of his epistemology by examining this new argument in the form of the indirect proof, namely, that if the proposition to be proved, P, is denied and proposition Q, which for some reason is unbearable, follows, then P is true. And our interest will center on our knowledge that Q is unbearable.

For example, Lewis says,

> If we adopt the Cartesian method of doubting everything which admits of doubt, we must stop short of doubting this. Because to doubt our sense of past experience as founded in actuality, would be to lose any criterion by which either the doubt itself or what is doubted could be corroborated; and to erase altogether the distinction between empirical fact and fantasy. In that sense we have no rational alternative but to presume that anything sensed as past is just a little more probable than that which is incompatible with what is remembered and that with respect to which memory is blank (p. 358).

Or again,

> Our sense of a cumulative temporal experience, mnemonically presented within the epistemological present, or in Kant's phrase, in the transcendental unity of apperception, not only is something of which we cannot divest ourselves; it is constitutive of our sense of the only reality by reference to which empirical judgments could have either truth or falsity or any meaning at all. Without it, there could be no answer to any question, nor any question to be answered, because there could be no such thing as fact and no intelligible discourse! (p. 361).

And in the same vein he writes,

> If it be said that empirical knowledge is impossible because it requires that something be assured in immediate experience, and that whoever formulates anything which he takes to be thus assured does so retrospectively and hence in violation of the requirements of immediate assurance, then the answer is that *if* what requires to be immediate in order to be genuinely apprehended were in

fact thus always just escaping us, then we should have no veridical awareness of it as having this quality of *not* being given (p. 331).

Now is it not clear that our knowledge that Q is false is, on Lewis' own showing, based on a knowledge of immediate experience, called once a "sense of past experience" and again a "sense of a cumulative experience" and still again a "sense of the only reality by reference to which" and so on, and finally "veridical awareness"? But let us recall that, according to Lewis, there is no knowledge of the immediate as such.

It is interesting to note that Lewis uses the same type of argument to prove that at no moment in the future can a nonterminating judgment be terminated by a test experience that would show whether or not this was a white sheet of paper before me. For he says, "There never will be a time when the fact or non-fact of this paper now lying on my desk will not make some trivial difference. If that were not the case, then it must be that at some future date it will become not only practically but theoretically impossible that there should be a scintilla of evidence either for or against this supposed present fact" (p. 177). That this should be true, Lewis tells us, as has already been noted, is not plausible. But how do we know that certain events may not be without consequences, and thus lost to enquiry and discovery? A third kind of knowledge?

In conclusion, I submit that Lewis' own analysis of knowledge proves that there *is* a third kind of knowledge, which is neither a priori nor empirical in his sense and which I would venture to call "metaphysical." I call it so advisedly, realizing that the very name "metaphysical" will suffice to cast suspicion upon it in the minds of some. But I would remind such persons that the rose of knowledge would smell as sweet by any other name of their own choosing.

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TOYNBEE AND THE CATEGORIES OF INTERPRETATION

In the July, 1949, number of The Philosophical Review (pp. 360–71), Professor John William Blyth of Hamilton College takes Professor A. J. Toynbee severely to task for certain supposed ambiguities and inconsistencies in his analyses of civilizations in the famous *A Study of History*. I think that Professor Blyth is mistaken, for the most part, in his criticisms and that the main mistake raises issues of sufficiently general importance for it to be worth discussing here.

Blyth finds an inconsistency between Toynbee's discovery and upholding of laws of historical development and his discovery and upholding of sundry irregularities and freedoms in historical development. Now, if Blyth's strictures apply (as I think they do) to postulations of law and postulations of freedom in general and not merely to personal peculiarities in Toynbee's forms of them, then they are of general philosophical concern; for, if they are valid, the philosopher of history has to choose between complete determinism and complete absence of law in history — a dilemma which is not made much more palatable to me by the fact that so many philosophers of history seem to have accepted it.

Blyth begins by saddling Toynbee with a thoroughgoing determinism. He first states that "the most significant generalization reached by Toynbee is the pattern he discerns in the life history of civilizations" (p. 361). Then comes the phrase "if his generalization does have the validity usually associated with laws established through the application of scientific technique" (p. 361); and by the next page the "if" has implicitly disappeared, and Blyth is assuming that the laying down of laws in a way not involving "a denial of historical determinism" was Toynbee's real intention, or at least his duty. (I cannot be sure which of these Blyth means, though the distinction is important for the critical, as distinct from the philosophical, aspect of his argument.)

On the basis of the determinism thus ascribed to him, Toynbee is castigated for four types of inconsistency: (*a*) as regards the future, in his hopes that we may after all escape our doom (p. 362);[1] (*b*) in

[1] As a matter of fact, Toynbee himself ascribes his refusal to predict the future not to any inadequacy in his laws, but to uncertainty of the evidence, or to

the analysis of the past, in his admitting "abortive" and "arrested" civilizations and "fossils" (p. 363); (*c*) in both, in his admitting inexplicable effects of geniuses (pp. 369–370); (*d*) in principle, in his explicit philosophical rejection of "necessity" (pp. 365, 369), which leads the critic to the conclusion: "If this explicit rejection of the principle of the uniformity of nature does not completely vitiate the search for general laws, it certainly restricts the significance of the uniformity he purports to find in the histories of civilizations" (p. 369).

Surely — as the last clause quoted as much as admits — there is no inconsistency in this position, except on the quite gratuitous assumption that when Toynbee speaks of "pattern" or "law"[2] he means something deterministic, such as the laws of physics are generally taken to be. I say "quite gratuitous," because I should have thought that when an author goes out of his way as much as Toynbee does not only to draw attention to irregularities, not only to stress the unpredictability of the future, but even explicitly to reject the concept of "necessity," he is entitled to have it supposed that by "pattern" or "law" he does *not* mean something deterministic — that these provisos are explanations of his concept of law, not contradictions of it.

If further evidence of this being Toynbee's position is required, beyond the passages and doctrines which Blyth himself cites, it is to be found in the Parable of the Climbers[3] — a passage which is of cardinal importance for the understanding of Toynbee, as well as being a "myth" worthy to set beside Bradley's "fresco" as one of the few great pictorial passages in English philosophy.

As a mere matter of interpretation, we must allow that Toynbee uses — not only implicitly, but explicitly — the category of nondeterministic law. In the first place, he *says* he does. In the second place, with it his system makes sense; without it the books are a mere muddle between a very doubtful presupposition and a series of later inconsistent hedgings about it. If ever there was a case for taking a thinker at his word, it is here; if ever there was a case for applying

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the evidence as regards a process still developing not being interpretable in the same way as in a completed process (*A Study of History*, I, 36–7, 159–160; IV, 108, 302; VI, 313–321). In any case, it must be remembered that Part XII, in which Toynbee will deal explicitly with the prospects of our present civilization, has not yet been published.

[2] Actually, I do not think that Toynbee uses these terms at all; if he does, it is very rarely; and this I think is significant. Nevertheless, I agree that he thinks constantly in terms of them.

[3] *A Study of History*, I, 192–196. Cf. III, 2–3, 373, 390; IV, 130.

the rule that a thinker must be interpreted by his own categories and not by those of another man, it is here.

I must stress that I am objecting to Blyth's technique only as far as *interpretation* goes. *Criticism* is a possible further stage (though I should still defend Toynbee there); but no one would deny that criticism is a stage to which Blyth or any other thinker is at perfect liberty to go on if his philosophical convictions so impel him. Blyth has the fullest right to show, if he can, that this category of Toynbee's is an invalid one. What he must not do, but what he apparently has done, is make a muddle of Toynbee by refusing to recognize it in Toynbee because he does not approve of it himself. That is like a Newtonian critic of Einstein saying, not, "Einstein's book uses non-Newtonian categories; therefore it is false, though consistent," but, "This book is about space; space is Newtonian space; but this book contains a great many statements inconsistent with Newtonian space; therefore it is a muddle."

We can, then, rescue Toynbee from the main charges of inconsistency which Blyth brings against him, by insisting on proper interpretative treatment. But, even granting Toynbee his essential category, there may still be inconsistencies of a minor kind in him — I am not concerned to deny this, though neither do I feel a call to make a special rereading of Toynbee looking out for instances of it. I should think it highly likely that there are inconsistencies in his handling of the category, for two reasons:

(1) The first is a general reason — and one in which I admit that for once questions of philosophical validity do intrude themselves into interpretation. The category is a very difficult one to handle consistently, because of its philosophical difficulties. It is difficult to state a demand for law without slipping into determinism. A non-deterministic law must be admitted by its upholders (among whom I would enroll myself) to be an odd thing — not quite a law, but a tendency; not a compulsive force, but a pressure; a way in which things tend to average out rather than an inescapable *fiat*. Even if we are not prepared to admit that for the stage of criticism these oddities would reveal themselves as signs of a radical inconsistency in the category, we have to admit that they do make the category a difficult one to state and handle with perfect consistency. Toynbee may well have fallen into some degree of error here.

On the other hand, one must allow that the oddity is one pretty widely accepted in sociology and psychology — in fact, in all the nonmathematical sciences. And the reason is clear: without it one

is in the dilemma, which Blyth tries to force upon Toynbee, of having either no law or full determinism, which is a situation that few non-specialist thinkers consistently accept, whatever they may claim. Right or wrong, this odd category has occurred often enough in the history of philosophy to be at least respectable. And (if once one can for interpretative purposes rid oneself of the feeling that it must needs be inconsistent) its use by Toynbee is masterly: it enables him to analyze the courses of civilizations that work themselves out in a "normal" way, without committing him to any cast-iron scheme of a kind that would compel him to deny the diversities of fact, let alone the hopes of the heart. In fact, it enables him to do the work which Spengler's brilliant pioneering[4] showed to be both possible and necessary, while avoiding most of Spengler's extravagances.

(2) The second reason has been led up to by this mention of Spengler. It is that Toynbee, despite his strong reaction from Spengler in many respects,[5] does remain much under his influence.[6] And this involves an over-great schematism,[7] which does lend a handle to misunderstandings of his doctrine of law such as those of Blyth.

I can agree whole-heartedly with Professor Blyth's final plea (pp. 370–371) for clearer and more critical concepts and distinctions and a more accepted terminology in the philosophy of history. There is much work to be done in analysis and tidying-up of the basic categories of the subject. Among the categories that need much careful philosophizing upon is this one of "nondeterministic law" — for its successful use by Professor Toynbee has gone far to establish it as a necessity for the philosophy of history, whereas Professor Blyth's difficulties with it do point to the need for definition, elucidation, defence.

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[4] In speaking of Spengler as a pioneer, I am not unmindful of the almost innumerable thinkers, especially on the Continent, who have theorized about "stages" of history. See the lists in Flint, Sorel, and Bury. It is in the elaboration of such ideas and the detailed fitting of them onto history — without which they are valueless — that Spengler pioneered, and pioneered greatly.

[5] *A Study of History*, IV, 11–13; V, 559; *Civilization on Trial*, pp. 9–10, 12.

[6] See the whole latter half of Vol. V of *A Study of History*.

[7] Notably Toynbee defines his "civilization" exclusively in political terms, thereby getting simplicity without great distortion; on the cultural side — e.g., Gothic with four stages in as many centuries, each with its strengths and its weaknesses; Shakespeare side by side with Elizabethan tombs in execrable taste — there is rich, even wild, diversity of fact, with which theorists of civilization must attempt to grapple.

REPLY TO DR. BUTLER

DR. J. F. BUTLER'S discussion of my criticism of Toynbee's *A Study of History* emphasizes and may help to clarify one of the critical problems encountered in an interpretation of history. The problem is the meaning and applicability of the concept of scientific law in the field of history. This concept, even as applied in the field of the physical sciences, has had a history of confusions and ambiguities. It is not surprising therefore to find the same confusions arising in the use of the concept in other fields. The problem cannot of course be fully analyzed in a few paragraphs, but a few remarks may help to identify more precisely the philosophic question at issue between Butler and myself.

Butler urges that Toynbee's interpretation of history requires the category of nondeterministic law for "without it the books are a mere muddle between a very doubtful presupposition and a series of later inconsistent hedgings about it" (p. 231). To insist on this point does not seem to me to "rescue Toynbee from the main charges of inconsistency" (p. 232). The muddle remains because it is contained in the self-inconsistent category of a nondeterministic law. To speak of such a law is to put a name on the muddle and not to remove it.

The urge to postulate a category of nondeterministic law, stated very briefly, seems to me to stem from a confusion of two questions which have since the time of Hume been generally recognized as quite different. The first concerns the degree of correlation discovered between the occurrences of a specific kind of event and the occurrences of its so-called effect. The second concerns the nature of the relation between any cause and its effect.

With the separation of these two questions, modern science, both in the study of physical nature and in the study of man and society, has made striking progress in the development and use of statistical laws. The successful use of such laws in prediction presupposes at least that degree of regularity or uniformity stated in the law. To deny the uniformity of nature in principle is to restrict the significance of all scientific laws, even those stating a perfect correlation, to mere summary statements of past events having no possible reference to the future.

One of the most perplexing things in modern philosophy is Bergson's persuasive reintroduction of the earlier confusion between the two

questions mentioned above.[1] He argues in Chapter I of *Creative Evolution* that our inability to foresee and predict all states of consciousness together with the historical uniqueness of each state establishes the principle of metaphysical novelty or creativity. The meaning of creative novelty initially taken as something uncaused and undetermined by past events is, however, immediately submerged in other confusions. The past is brought up into the real present and the whole is called a creative vital force. Thus a creative novelty which is initially *uncaused,* in the argument, is soon turned into a *result* of an indeterminate force; and we wind up with an apparently plausible but nevertheless self-contradictory concept of an undetermined or uncaused result. Bergson saw that his assertion of creativity and the correlative thoroughgoing denial of uniformity implied the falsity of scientific laws taken as descriptions of reality. It should be added that this stricture applies with particular force to just those laws which scientists find most satisfactory because they express a high degree of correlation and are most reliable in making successful predictions.

If by a nondeterministic law Butler means merely that some laws express less than perfect correlations between cause and effect, I have no quarrel with him, although I should not suppose that statistical laws were oddities. If, however, a nondeterministic law concerns events which are not determined or *caused* by anything in particular, but are nevertheless the *result* of some mysterious "pressure," I seriously question the intelligibility of the concept.

In direct reply to Butler I ask only that my criticisms be judged in the light of what I said rather than in terms of Butler's categories. I took pains not to formulate a dilemma for Toynbee in terms "of having either no law or full determination" (p. 233). I made explicit the distinction "between universal determinism and the more limited kind of determinism involved in specific causal relations."[2] The discovery of specific causal correlations neither presupposes nor implies universal determinism, either in the sense that every event has a cause, or in the sense that all events are related in one single causal nexus. Hence the denial of universal determinism does not entail a denial of the truth of specific laws.[3] A scientific law purporting to be true of

[1] Reference is made to Bergson at this point because Toynbee and Butler seem to have been strongly influenced by him. The analysis of Bergson's argument suggested here is of course greatly oversimplified, but it can be documented in detail.

[2] *Phil. Rev.,* LVIII (July, 1949), 362.

[3] As a matter of fact it seems to be generally overlooked that the discovery of specific causal correlations requires the scientist to assume that many things

reality presupposes only that reality exhibits and will continue to exhibit just that limited degree of regularity or uniformity expressed in the law. Although I reject the dilemma offered by Toynbee, I suggest no dilemma for him but only that he decide whether civilizations are the kind of entities that have this minimum sort of regularity and that he be consistent. After truly Herculean efforts to establish laws purporting to be true of all known civilizations to date, Toynbee is quite unnecessarily and illogically ready to scrap the fruits of his labor because he encounters another kind of entity, namely individuals, whose actions cannot be predicted in terms of his laws of civilizations.

The other four specific criticisms I offered have nothing to do with the question of universal determinism. They were directed to the inadequacies of the evidence offered by Toynbee for the generalizations he *does* make about civilizations. I would be content therefore to have these criticisms stand or fall on the basis of the presence or absence of the appropriate logical relations between the evidence and conclusions of Toynbee's study.

Butler's reference to the Parable of the Climbers prompts me to make one more observation. I should gladly agree that it may be "a 'myth' worthy to set beside Bradley's 'fresco' " (p. 231) or even that it may have the lasting impact of Plato's myth of the cave. Myths are still powerful weapons of thought. If *A Study of History* is to be taken merely as an elaborate myth for the twentieth century, there can of course be no argument, since myths are neither true nor false and all evidence is irrelevant. But if it is to be taken as a serious scientific inquiry, as Toynbee suggests, questions of truth and of the logical relations between evidence and conclusions do become important. The beauty of a myth is a highly unsatisfactory measure of the truth of a scientific generalization.

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are causally irrelevant to the phenomena under investigation. For example, Newton would probably never have made the contribution he did had he wasted his time trying to discover a causal connection between the fall of the apple reputed to have hit him on the head and its taste or color.

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[1] [This list was supplied by Professor Mommsen as a supplement to his review of Eugenio Garin's *Der Italienische Humanismus (Philos. Rev.,* LVIII [November, 1949], 627–630). All items extracted from Dr. Garin's footnotes appeared in Italy or Switzerland between 1939 and 1947. Professor Mommsen adds: "It seems noteworthy that, to judge from Dr. Garin's book, very little was published in Germany during those years, quite in contrast to the extensive research in that field done by German scholars in former years."—EDITOR]

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REVIEWS OF BOOKS

A DREAMER'S JOURNEY. The Autobiography of Morris Raphael Cohen. Edited by FELIX S. COHEN. Boston, Beacon Press, 1949. (Text and Library Edition: Glencoe, Ill., The Free Press.) Pp. xiii, 318. $4.00.

Philosophers do not generally write their autobiographies — unless their metaphysical writings be so construed. When we are fortunate enough to have them, such autobiographies are of more than personal interest. They also become sources for philosophical understanding, showing us the motivations that entered into philosophical attitudes and helping us locate particular features of cultural milieu or historical events that shaped or found expression in philosophical production.

Morris Cohen's autobiography, as Dr. Felix Cohen has edited it, succeeds in these respects to a remarkable degree, in spite of the fact that it is incomplete and fragmentary in parts. And this over and above the keen appreciation it invokes of an inspiring personality and a humane wisdom. It will round out the picture for those who knew Morris Cohen and provide the outlines of a rounded picture for those who knew only his philosophical writings.

Two themes enter into Cohen's formulation of the purpose of the autobiography. There is, in the first place, "a burning desire to tell the story of the generation which cut its roots in the old home, crossed the ocean into a strange land, and brought up its children to make their contributions to a free world. This would be the epitaph I should write upon the graves of those who had struggled heroically to open the gates of opportunity to me and to my children" (p. 160). The philosophical analogue of this desire is expressed in his interpretation of Spinoza and religion: "If we are to attain to true human dignity, we need some sense of our continuity with the past and the future, a consciousness of ourselves not as temporary flies but as waves of a human ocean larger than our own lives and efforts" (p. 217). The second theme is explicitly tied to the first when Cohen connects piety, in Santayana's sense of "reverence for the sources of one's being," as a corollary to the Socratic maxim "know thyself" (p. 229). Cohen adds "None of us are self-made men, and those who think they are, are generally no credit to their makers." In this setting, the theme of the autobiography is the development of self-consciousness: "my own journey from the medieval to the modern age — the journey of a dreamer who never worshipped the goddess of practicality" (p. 205).

It has its emotional justification: "What could be more natural in the half-light of dusk, when the tasks of the midday sun are over, than to look back to the half-light of dawn, when we were young and eager and the world had alluring freshness, when there were so many things to be done, and ours was the opportunity" (p. 208). And it has its philosophic base in the feeling of "the mystery of the coming and passing of consciousness and animal life" and the explicit conclusion in the dedication: "Brief is the life of man, and of uncertain duration is his handiwork, be it ships, houses, governments or laws. But the echoes from soul to soul will go on so long as human life lasts."

The story of the child is set in the marginal conditions of Jewish life in the old world of Russia. Despite the prominence of hunger and misfortune and the reign of accident, we see how the unremitting struggle of parents combined with the insulating role of religion and the moral and intellectual influence of a respected grandfather to produce an inner superiority to wordly fortune. That self-esteem should not be dependent on success or agreement with others was an excellent philosophical protection for life in an America in which success was to be increasingly the measure of worth.

The young boy is seen adapting himself to New York's east side and to Brownsville during the last decade of the nineteenth century, widening his intellectual contacts, coming to know the reality of the class struggle in the lives of the people around him. There is a keen appreciation of the City College and its meaning to its students. Philosophical outlook begins to take shape in a variety of contexts. For example, there is the tribute to the anatomy teacher "who helped me to realize what I had never before considered particularly important, namely that I had a body and would, in all probability, never have another one" (p. 91). This fundamental materialism later permeated Cohen's philosophy, in the same sense in which it permeates Santayana's *Life of Reason.* Incidentally, there is little reference to Santayana in the book, although Cohen's relation to the *Life of Reason* was one of emotional warmth, and his own value outlook was best conveyed to students in a course on the philosophy of civilization in which he used these volumes as a text.

The critical point in Cohen's development was the personal influence of Thomas Davidson. Davidson came from the philosophical heights. He opened up vistas through his erudition. He gave a more individualistic bent to Cohen's youthful Marxian socialism.

> But the enthusiasm of Davidson that influenced me most was the dream of an Encyclopedia of Philosophy that should do for the culture of the twentieth century what the Brothers of Sincerity did for the tenth, and Diderot and d'Alembert did for the eighteenth. This dream has dominated my whole intellectual life. All my reading somehow or other gets fitted into that scheme. And

though I was never to realize that youthful ambition, it has given form to all of my fragmentary efforts at the statement of a philosophical position adequate to the understanding of the problems of modern civilization (p. 109).

The future philosophical biographer of Morris Cohen will probably find this dream to be the key to much of the unity in Cohen's thought and effort. It had an essentially practical bent, in the broad sense of the term. It arose in the midst of an interest in social reform. Even before this, intellectual theories had been seen by him in the context of their social relevance:

I felt that the fundamental issue between individualism and socialism was inextricably bound up with the difference between the introspective method of Mill and the historical method of Marx and Engels.... I had a vague conviction that there was something radically wrong with Mill's doctrine of induction and his attempt to build up an economy out of individual preferences and a world out of independent things, facts, or "states of mind." After all, somehow or other things are ultimately connected in the same universe (p. 167).

The dream reappears in 1934, and in the several passages throughout the book in which it is described there is always the reference to the needs of a new age or of twentieth-century civilization.

In this light, Cohen's constant concern with the philosophical assumptions in a diversity of fields of science, law, and history, as well as his pedagogical theory of introducing students to philosophy through the analysis of such applied fields, is readily intelligible. The brief account he gives (pp. 175–176) of the development of his legal outlook — the field in which he was to do his most influential practical work — in the setting of specific human and political problems makes the point most clearly. Even his concern with fundamental logical and metaphysical problems is cast in the same way. The conception of polarity is seen as a way of avoiding both Mill's extreme individualism and the absolution of Hegel and Marx (p. 170); and a projected metaphysical treatise is seen in terms of the way in which it would help in the cause of "a liberalism based not on the belief in necessary progress but rather on sad experience as well as on hopes" (p. 194). It follows that fundamental philosophy always remained for Cohen a problem of understanding relevant to outlook or practice in the widest sense. Whether his many attacks on practicality in philosophy and his stress on the purity of contemplative knowledge were directed against narrowing interpretations or whether they represented a genuine departure from his guiding dream is a question that a philosophical biographer will have to face in detail.

That the outcome of the dream was an isolated skeptical Socrates — or, as he calls it, "a stray dog among the philosophers" — instead of a practically and progressively oriented philosophical movement is an extremely significant comment on the state of American civilization in the last half-century. (One wonders how wide this phenomenon

is among contemporaries, and whether there is, so to speak, a high coefficient of evaporation of dreams and the sense of importance of their work among philosophers.) But the remaining chapters of the autobiography give some inkling of the way in which Cohen tried, on an individual basis, to live a liberal philosophy as well as to expound its tenets. His work in founding and guiding the Conference on Jewish Relations and his underlying theoretical approach to Jewish problems are developed with some detail. The chapters on his life at the City College are overmodest; they do not show sufficiently the profound influence which his personal integrity had in a variety of demoralizing situations and the degree to which it won the respect of succeeding generations of students. Anecdotes and events not included in the autobiography could easily fill a volume. To take one example, his refusal to belie his liberalism in times of hysteria can be seen from the answer he gave to a question at a student meeting he was addressing on "Liberalism." After Cohen had stated his conception, a student demanded a yes-or-no reply to "Are Communists liberals?" Cohen answered simply "Some are, some aren't," thus making clear that judgment of personal qualities of an individual is not to be confused with opposition to a particular platform or association. The view that individuals are the locus of human ends is a central doctrine in his *Faith of A Liberal.*

Reading *A Dreamer's Journey* re-enforces the impression that Morris Cohen's life, over and above his theories, has a profound philosophical importance. Its careful study by a philosophical biographer will help immensely to clarify understanding of the relation of philosophical activity and human life and may suggest norms for their relation.

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THE STATE AND THE CITIZEN. An Introducton to Political Philosophy. By J. D. MABBOTT. London, Hutchinson's University Library, 1948. Pp. 180. 4*s.* 6*d.*

This is an excellent little book. The preface does not state the exact purpose for which it is intended, but it is very much to be hoped that lecturers at universities and colleges will seriously consider its adoption as a textbook to accompany courses on political philosophy. It seems to me that this is just the function for which it is most adapted, although more advanced students can still gain much new insight from studying it. Such will find of special value the chapter on Hobbes, the discussion of the limits of state action, and the all too short chapter "The State and Other States." Its very virtues, however, make the book somewhat difficult to review. It is so sound and balanced that

there is little in it which would be anything but very hard to attack, and the present reviewer does not wish to quarrel with any of its major contentions.

The work starts with a brief but very illuminating survey of Hobbes, Locke, and Rousseau. Hobbes and Rousseau are perhaps "white-washed" rather too much, and Locke rather too little. Mr. Mabbott points out how the interest of at least the last two lies in the conflict of three incompatible principles, the claim of the individual to absolute rights against the state, the principle of government only by consent, and the interests of good government. He then gives an account of the philosophical development which tended to subordinate the individual to the state up to the Hegelians, with special reference to T. H. Green.

Then, leaving the historical sketch, he directs the second part of his book to the limits of state action. State action has been attacked in principle on the basis of a theory of natural rights and on the ground that compulsion is necessarily harmful because it leads people to act from wrong motives and deprives them of a training in morality. Mr. Mabbott considers and makes short work of these objections, but he is very far from being a totalitarian. The upshot of the argument so far is that we cannot say that all control is bad per se or that the function of the state is merely negative, to prevent or remove hindrances to a good life; but this of course leaves open the question whether there are or are not good utilitarian reasons for rejecting state interference even in many cases where the immediate material effects would seem to warrant it. But in the next chapter he raises a very important further point. He insists that not all action can be regarded as having a social object. The pursuit of art or thought or religion has not as such. Of course he could not deny the importance of their social effects, but he insists that the greatest social good has often been brought about by men who sought truth, beauty, and holiness as ends in themselves and not as means to an extrinsic social good. It may be doubted whether we should go as far as the author, who seems to hold (p. 72), if I have not misunderstood him, that a man who pursued one of these ends disinterestedly would be justified even if he thought nothing of the effects on other men of his actions in so doing — I could not regard as anything but selfish, e.g., a great thinker who never published his thoughts to others — but I think what is really meant is that these ends must be pursued mainly for their own sake and not for further ends external to themselves. Of course a thinker who does not merely think in solitariness is envisaging a social effect, i.e., the communication of his thoughts to others; but that end must like his solitary thinking be treated as of value in itself (in so far as his thoughts are good) and not be justified merely as a means to other ends. Hence the state must not for political ends order the thought, art, and religion pursued to be of a certain kind. The very essence of these activities is, as Mab-

bott says, contradicted by dictation by the state. If I adopt religious beliefs by order of the state for political reasons, I am not really religious; if I thus adopt my scientific beliefs, I am not really scientific. Indeed, I am in neither case really believing at all, for I can only believe what really seems to me true. The author thus suggests the principle that the main ground for individual rights lies in the existence of activities which are self-justifying and therefore exclude state control on principle. It is much to be hoped that he will develop this principle further elsewhere. It is not clear just how the argument could be applied against state control in the economic sphere; but, in view of the current controversies on the subject, this part of the book will be read with very special interest.

The third part discusses the place of the state in relation to other associations within it and to other states, all too briefly. Mabbott rejects the view that unity of national feeling should be regarded as one of the goods at which political organization should aim, since it is too explosive, requiring a war or other grave crisis for its development. On the other hand a unity which is of real value grows up spontaneously through the co-operation of individuals in other associations small enough for the members to have some knowledge of each other. He distinguishes four theories as to the relation of the state to associations within it: (1) abstract monism, which would eliminate every association but the state; (2) concrete monism, according to which the associations would be retained but merely as instruments through which the state worked; (3) pluralism, which would find no special function for the state and therefore replace it by a complex of other associations; (4) his own theory, which treats the state as one association among others but with a very special function of its own in relation to the rest, i.e., that of controlling them in respect of certain aspects of their activity. The problem is illustrated freely by reference to the history of the relations between the state and trade unions in Great Britain.

The chapter (XIII) which follows, on the relations between different states bristles with interest, but I think it would go better with section D than with section C in which it is actually placed. I quote its fundamental principles at length. "Firstly, moral rules derive from moral values. These values are the same for national and international decisions. But since the rules are directed to achieving the values, they may vary with circumstances and may therefore differ in the two fields. Secondly, 'the good of a State' or 'the national interest' must be analyzable into the interests of individual citizens; anything claimed to be a 'national interest' and not so analyzable is an illusion and a false goal of policy. Thirdly, a State is not a moral agent. International morality therefore means either the morality of citizens of one State in their relations with citizens of other States

or the morality of the government of one State in relation to governments and citizens of other States" (p. 139). It would certainly be a very great gain in clear political thinking if all contributors to the subject kept these obvious principles in mind as Mabbott does, but it is to be feared that the majority of those who rightly denounce the fiction of state personality do not envisage with consistency the consequences which follow from their denial. We indeed all still use phrases which seem to imply the ultimacy of the state as a quasi person, and the precise way of analysing them in terms of individuals has not been often discussed. As our author shows, in the next chapter (XIV), there is no uniform way of doing so in all cases because the method will vary according to the specific nature of the proposition; but this is no excuse, he realizes, for falling back on a personification the absurd consequences of which he exposed. Finally he disposes of the cant which exalts the unity of feeling in a state which is based on hysteria to the place of the supreme good.

In the interests of truth I must conclude by pointing out two mistakes in English history. (1) Mabbott says that the six laborers of Tolpuddle received seven years' deportation "for binding themselves by oath to attempt to get their wages raised from seven shillings to ten shillings a week" (p. 114), but omits to say that owing to popular protests these sentences were soon remitted. (2) Surely the statement that by 1832 "it was recognized that the basis of our [the British] constitution was to be universal democracy (with a few lingering anomalies)" is most inaccurate. The Reform Bill of 1832, itself much more far-reaching than had been expected, only gave the vote to a very small fraction of the population, and for long afterwards most politicians regarded the idea of democracy with great horror.

A. C. EWING

Cambridge University

THE VITAL CENTER. The Politics of Freedom. By ARTHUR M. SCHLESINGER, JR. Boston, Houghton Mifflin Company, 1949. Pp. xiv, 274. $3.00.

A few years ago, it will be recalled, Professor Schlesinger's brilliant study *The Age of Jackson* was awarded the Pulitzer Prize in history. In that book he developed a generalization about American politics, or more precisely about liberal movements in American politics: viz., the American business community, once the period of Hamilton's fiscal reforms was past, became notably infertile in political leadership; it became addicted to a form of conservatism that was timid, unimaginative, and hysterically frightened of reasonable reform; and in consequence it was repeatedly forced to acquiesce in limitations of

its power which it might more wisely have instituted as self-regulation. Accordingly the pattern of American liberal politics has been a self-protective revolt of other social and economic interests — farmers or wage earners — against the rampant and irresponsible commercialism or industrialism of the business community. The successful outcome of these revolts has been on the whole to avoid genuinely revolutionary movements in American politics and to preserve the political freedom and the individual initiative on which the business community itself depended. The liberals from Jackson to Roosevelt repeatedly saved the standpat conservatives from the consequences of their own political ineptitude, when they were too irresponsible to see the public interest or even their own interest in any terms larger than the business practices to which they were accustomed.

In *The Vital Center* this generalization is somewhat extended and is applied to the contemporary political situation. It is applied to the industrial and commercial bourgeoisie at large and not to the American business community alone. The entrepreneurs created by the industrial revolution have on the whole been a plutocracy rather than a ruling class. Thinking in terms of profits, they have been unable to take a genuinely and responsibly political point of view, which consists essentially of the conciliation of class interests and the compromise of class conflicts. Depending upon settled conditions of contract and exchange, they have tended to lack the courage needed by a ruling class which has to deal with elements in the community, whether radical or conservative, that are willing to use force to gain their ends and are therefore revolutionary in their methods. The upshot of bourgeois politics is the temporizing procedure of appeasement, which succeeds in a period of stability but is doomed to failure when it is confronted by an opponent, whether fascist or communist, that regards appeasement only as an invitation to further aggression. From Professor Schlesinger's point of view the latter condition is more typically that with which political leadership has to deal. The period of quiet between the cessation of revolution in 1848 and the outbreak of the First World War was an episode which bred the intellectual fatuity of a belief in progress and human perfectibility. The abiding fact that political leadership has to face is that industrial societies have been fundamentally frustrating and that human nature, when frustrated, is fundamentally aggressive. The qualities required of political leadership are therefore above all the courage to face crisis and the intelligence and moral responsibility to remove the causes of crisis.

These qualities of responsible leadership have been found, in Professor Schlesinger's judgment, sometimes among responsible conservatives, as distinguished from the standpat conservative largely produced by the business community, and sometimes among responsible, non-revolutionary liberals, as distinguished either from fanatics or from

the "Doughface progressives, who use liberalism as an outlet for private grievances and frustrations" (p. 159), who complain but never take the responsibility for getting anything done. The "Doughface" is Professor Schlesinger's special aversion, pursued at times with perhaps unnecessary vigor. The effective liberal in American politics, as he points out, has often been a man of conservative or even aristocratic extraction who, being at odds with the standpat conservatism of the business community, became the leader of the radical opposition. In other cases, as the author believes, he may derive from the ranks of organized labor. In either case he conforms to what Professor Schlesinger calls "the politician-manager-intellectual type" who can persuade "society to move fast enough to escape breaking up under the weight of its own contradictions" and thus can forestall the "professional revolutionist" (p. 155). Whether conservative or liberal, the common quality of political leadership is responsibility — the willingness to make decisions, to face criticism, and to abide by the consequences of the position taken. For this reason communism, or indeed any type of dictatorship, excludes genuine political leadership; it does not permit criticism and therefore does not accept moral responsibility. On a practical level, both in American and international politics, Professor Schlesinger's book is essentially a plea for a revival of noncommunist radicalism — a radicalism that will deal courageously and constructively with the problems of an industrial society without abandoning the values or the practices of political freedom.

The social philosophy of Professor Schlesinger's book might, I think, be not inaccurately described as a very free adaptation of Marxism in the light of the American political tradition and also in the light of post-Marxian psychological and sociological science. In a very broad sense it is a theory of economic determinism. The fundamental problem of modern society is regarded as posed by the depersonalized organization of industry or more specifically by the psychological and sociological dislocations that result from the impersonal nature of human relations in an industrial society. Professor Schlesinger follows the lead of many social psychologists in arguing that the detachment of the individual from the intimately felt and clearly perceived purposes of a human community has resulted in a large accession of "anxiety," frustration, insecurity, and aggressiveness. The purpose of a "non-communist Left," as Professor Schlesinger conceives it, must be the restoration of a sense of social purpose and of individual effectiveness (p. 249). If this conception is called economic determinism, it is of course a Marxism freed from the dogmatism but not from the generous ideals of Marx and still more from the perversions that Lenin introduced into the Marxian tradition. Professor Schlesinger's social philosophy might also be described as a frank acceptance of the existence of social classes and of conflicts of interest between them, in

contrast with the sentimental kind of liberalism that tries to imagine society as all one happy family. It is, however, the theory of class conflict contained in the Tenth Federalist Paper, which reflected the realism of the first generation of American political thought; it is not the theory that was metamorphosed into the dictatorship of the proletariat. Professor Schlesinger's book is a vigorous reaffirmation of native American radicalism. It is his belief that he speaks for a rising generation of Americans who were born late enough to have escaped the *ignis fatuus* of communism and the false dawn of the Russian Revolution. In this an older generation can only hope that he is right.

GEORGE H. SABINE

Cornell University

THE NEW SCIENCE OF GIAMBATTISTA VICO. Translated from the third edition (1744) by THOMAS GODDARD BERGIN and MAX HAROLD FISCH. Ithaca, New York, Cornell University Press, 1948. Pp. xv, 398. $5.00.

That the revolt of a solitary thinker against the prevalent Cartesianism of the early eighteenth century should have carried him at once into positions similar to those taken by others only after a long process of "overcoming" this system may supply a crucial instance to anyone interested in studying the limiting forms of Western thought. Indeed on looking back it is easy to see that, given on the one hand the established humanist tradition, historically oriented, always deeply political and ethical in content, and issuing in the seventeenth century in the revival of natural law, and on the other hand the antihistorical bias of Descartes, the resulting tension had almost inevitably to result in some attempt to find an epistemological basis for historical and sociological thinking. Vico's originality lies in his realization that the problem existed and in the radical solution he found for it. Whatever he may have owed to Bodin and other predecessors is transformed by the immediate dialectical situation. The subsequent revival of interest in Vico that accompanied the nineteenth-century search for a philosophy of history is again an interesting phenomenon and has been sketched by Professor Fisch in the introduction to the translation of Vico's *Autobiography* published by him and Professor Bergin in 1944 (Cornell University Press). Fisch is eminently qualified to elaborate this sketch from a less external point of view to indicate what Vico has meant to this succession of thinkers. Not all of Vico has been accessible to their varying patterns of thought. The mere idea of the *ricorsi,* it seems, has often been taken up without much consciousness of the profounder aspects of Vico's system, while only latterly his more essential theory of knowledge

(we know only what we have created, i.e., mathematics or human history, but not the physical world) has been most active, particularly in Croce and Collingwood. But again, Collingwood's sketch of Vico's system in *The Idea of History* is interesting from the point of view of its omissions. Obviously influence can only take place where there is a living train of thought to receive it.

Yet accident too has played a part in the rather slow realization of the scope and implications of Vico's ideas. The arrangement and style of the *Scienza Nuova* are unnecessarily prolix; and this defect led to the return of Vico's thought to the stream of European thinking not in full form but, mainly, in the abridgment of Michelet and the (excellent) interpretation of Flint. Even Italians relied on these approaches, and few have read the entire work. Now that Vico has become a present-day philosopher, with something important to say on the supposed conflict between "humanism" and "science," the first English translation of the complete *Scienza Nuova* appears at a moment of good augury. With the same translators' version of the *Autobiography* — the introduction to which serves also for the *New Science* — it provides an indispensable tool for future work on Vico. That may be said because the difficulties of Vico's style and language are such as to baffle at times even the Italian reader, but where the Italian reader may glide over the difficulties the translators have been obliged to face them. They have had not only to control the terminology of seventeenth-century jurisprudence and several other disciplines, but to do justice to the altered sense which this terminology perpetually assumes in Vico's new perspective; and they have had to come to conclusions with his rather frequent lapses of various kinds. All this has been faithfully done; and, while it cannot be pretended that all obscurities have vanished, such a translation is bound to be a very valuable commentary as well.

JAMES HUTTON

Cornell University

TOMMASO CAMPANELLA FILOSOFO DELLA RESTAURAZIONE CATTOLICA. By GIOVANNI DI NAPOLI. ("Problemi d'oggi," 2d series, vol. X). Padua, Cedam, 1947. Pp. vii, 539, 850 lire.

Tommaso Campanella (1568–1639) is known to English readers primarily for his interesting utopia, *The City of the Sun,* and for his *Defense of Galileo,* whereas the remainder of his work and activity has not been made the subject of any detailed study in English, as far as this reviewer knows. In Europe, and especially in Italy, his phantastic conspiracy which resulted in his trial and long imprisonment, his political prophecies as well as his metaphysical and theo-

logical doctrines, have long been the subject of scholarly investigation; and, more recently, increased interest in this thinker has resulted in the publication of many monographs and articles, of critical editions of some of his unpublished works, and of a standard bibliography.

The monograph by Di Napoli is divided into two separate sections of unequal content and value. The first section (chapters I–III), which deals with Campanella's life, his political views, and his reputation, tries to establish against the authority of the leading nineteenth-century biographer, Amabile, that Campanella was not a hypocrite when he demanded a universal monarchy under the overlordship of the Pope, but a sincere proponent of the Catholic Reformation. There is a plausible nucleus in this thesis, since nineteenth-century scholars were too prone to speak of hypocrisy when confronted with intellectual or moral conflicts and inconsistencies which they could not understand. However, the author seems to overdo his point by denying any element of opportunism and by failing to distinguish between Campanella's good intentions of being orthodox and the actual accordance between his views and Catholic orthodoxy. This whole section is needlessly repetitious and filled with verbatim quotations from more or less modern sources that are of dubious value, selected without judgment, and cited without care.

The second section (chapters IV–XV), which deals with Campanella's doctrine, is much more useful. The author gives a detailed account of Campanella's metaphysics as well as of his ethical, political, and religious views, with ample quotations from all his published works, sometimes also citing from manuscript sources. On the whole, this account is clear and coherent and surpasses previous studies in length and completeness.

The author is weak on questions of background and sources, and obviously much more work remains to be done on Campanella in that respect. The book is also spoiled by numerous errors in names and quotations which may not all be the printer's fault. Not everybody will find it easy to recognize Dionysius the Carthusian in Dionigi di Chartres (p. 312). In a survey of scholarship that claims to be comprehensive, one is surprised not to find the name of E. Cassirer; and neither youth nor bias excuse a statement such as the one made about Fiorentino, one of the most learned and most meritorious nineteenth-century historians of philosophy, that "as usual, his preparation was not very strong" (p. 20). In spite of its shortcomings, the work constitutes the most detailed recent treatment of Campanella's life and thought and will remain indispensable as long as Firpo and Amerio, the two leading authorities on the subject, will not present the results of their studies in some comprehensive work.

PAUL OSKAR KRISTELLER

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THE MORAL LAW, OR KANT'S GROUNDWORK OF THE METAHPYSIC OF MORALS. Translated, with an analysis and notes, by H. J. PATON. London, Hutchinson's University Library, 1948. Pp. 152. 15*s*.

The Moral Law is clearly the finest, single-volume introduction to Kant's ethics available in English. Professor Paton has wholly accomplished his self-imposed task: to make Kant's thought "move in an English dress with some ease and even...with some elegance." This ease and elegance has been achieved by faithful rendering into English of Kant's text, and never at the expense of philosophical adequacy. For most Englishmen and Americans, who are less familiar than Paton with Kant's language and thought, this translation unveils the meaning, logic, and structure of Kant's ethical position.

The actual translation is preceded in the book by forty pages of analysis and is followed by ten pages of careful notes. Both the analysis and the notes have an essentially similar function. They are bridges between the text of the *Groundwork* and the wider contexts in terms of which the text is to be understood. These wider contexts are, on the one hand, Kant's writing itself and, on the other, Paton's more extensive and meticulous interpretations of Kant, in particular *The Categorical Imperative* and *Kant's Metaphysic of Experience*. The major difference between the analysis and the notes is that the former introduces the *Groundwork* as a whole while the latter are clarifications of specific terms and statements. Paton has organized and presented these materials with maximum effectiveness.

About the translation itself, apart from its general accuracy and its elegance, three things are worthy of note. First, Kant's sentence structure has been preserved in the English rendition. The long and complicated sentences are translated just as Kant wrote them. To compare Paton's translation with others in which Kant's sentences are shortened and simplified is to demonstrate how appropriate Paton's procedure is. Almost invariably Kant's meaning is distorted by simplification; and all too frequently, in the process of simplification, words essential to Kant's meaning are omitted altogether. Secondly, these long and complicated sentences are in general clearer and more precise in Paton's English than in Kant's German. The increase in clarity and precision has been obtained by punctuation in the text of the translation and by the notes which follow it. For example, Paton employs dashes to set off some of the longer parenthetical elements in Kant's sentences and uses the notes to specify the nouns referred to by Kant's indefinite pronouns. Thirdly, the argument of each of Kant's chapters has been given a more obvious structure by the use of subheadings, inclosed in square brackets to distinguish them from Kant's own subheadings.

In this process of clarifying the text and argument of the *Groundwork,* Paton is seeking to unveil what Kant really intended to say as distinguished from what Kant did in fact say. Because, in Paton's view, the traditional interpretations of Kant's ethics are seriously mistaken and because *The Moral Law,* including the analysis and the notes, is an argument in support of Paton's interpretation, Paton's translation of the *Groundwork,* one might suspect, would be biased in favor of his interpretation of Kant. But no such bias can be detected in the translation. Whoever wishes to debate with Paton the interpretation of Kant may do so, using Paton's own translation of the German. The issues concerned with the interpretation of Kant are presented in Paton's analysis and notes. In these notes and the analysis, he directs attention to statements ignored by those who defend the traditional interpretation and emphasizes phrases in which Kant qualifies or specifies some of his more general and perhaps misleading statements. This, however, far from being objectionable, is invaluable. Even those who defend the traditional interpretation of Kant must take account of Paton's evidence. In taking account of it, their own views of Kant will be deepened and broadened even if they cannot in the end agree with Paton.

Those who would debate with Paton the interpretation of Kant's ethics must consider both *The Categorical Imperative* and the analysis and notes of *The Moral Law.* For in reference to this larger issue concerning the interpretation of Kant, *The Moral Law* and *The Categorical Imperative* are companion volumes and must be examined together. But simply as an introduction to Kant's ethics, enabling the student to make of Kant what in view of twentieth-century thought can be made of him, *The Moral Law* must be read and can be read by itself.

STUART M. BROWN, JR.

Cornell University

EARLY THEOLOGICAL WRITINGS. By WILHELM FRIEDRICH HEGEL. Translated by T. M. KNOX, with an Introduction and Fragments translated by RICHARD KRONER. Chicago, The University of Chicago Press, 1948. Pp. xii, 340. $5.00.

This translation of the longer manuscripts of Hegel's youth, first collected and published in Germany by Hermann Nohl in 1907, is exceedingly well done. It is long overdue. These essays and fragments have been influential on the Continent during the past thirty years in a certain re-evaluation of the Hegelian philosophy. With the appearance of this book the English-speaking world will learn something at first hand of the genesis of Hegel's ideas, the dominant intellectual themes

of his youth, and the struggle of his penetrating, comprehensive mind to achieve clarity.

Those accustomed to the obscurity and heaviness of Hegel's thought and style will be pleased to discover the freshness and spontaneity of these early works. They are tentative, unsystematic, often careless in structure and composition. Unfortunately pages or sentences are often missing, causing serious lacunae in the development of ideas. Despite this, two chief essays translated, "The Positivity of the Christian Religion" and "The Spirit of Christianity and its Fate," are substantially complete in terms of intellectual wholeness, if not in form. They are greatly suggestive. Wilhelm Dilthey, first to bring to light these unpublished manuscripts and to write about them, declared that Hegel never wrote anything finer. At all events, these essays will repay careful reading, even by those who have been repelled by Hegel and know little of his mature writings.

Most interesting is it to see the development in Hegel's point of view within these essays. The conflicting currents of Enlightenment and Romanticism are here evident. His immersion in the thought of pagan Greece and Rome put him at odds with Lutheran orthodoxy, still so powerful a cultural factor in the Germany of his day. Hegel was eventually able to work out a synthesis of the pagan and Christian traditions, of Romantic feeling and Enlightenment reason. That synthesis became, of course, his system of absolute idealism, the key to which is his dialectical logic. The mediating key was not yet found, when, as an unknown private tutor, he composed these long essays. Important problems were: the inadequacies of Christianity as an individualistic, private, pessimistic, otherworldly, and foreign religion as contrasted with the joyous, social, humanistic faith of Greek polytheism; the issues of faith versus reason, authority versus freedom, dogma versus natural piety. These and other problems are genuinely wrestled with and frequently clarified, not "mediated" and synthesized as in the later system. It will be surprising how relevant much of this material appears to contemporary readers. Hegel as a critic of our cultural heritage had, it appears, even in his youth, few peers.

Professor Kroner has translated some minor fragments and furnished a readable introduction to Hegel's entire philosophic position. Both he and Professor Knox deserve high praise for the accomplishment of a difficult task. May the University of Chicago Press be encouraged to continue making such valuable work available in English!

J. GLENN GRAY

Colorado College

ANCILLA TO THE PRE-SOCRATIC PHILOSOPHERS. A Complete Translation of the Fragments in Diels, *Fragmente der Vorsokratiker.* By KATHLEEN FREEMAN. Cambridge, Massachusetts, Harvard University Press, 1948. Pp. x, 162. $3.50.

The translations incorporated in this volume are based on the fifth edition of the *Vorsokratiker* which is now commonly referred to as "Diels-Kranz" since Kranz, besides revising the text, has provided a new German translation and added much explanatory material. While Miss Freeman's *Companion to the Presocratics* (Oxford, 1946) summarizes the doctrines of the pre-Socratic thinkers and gives some information about their lives, this book presents in English whatever has survived of their actual works. One may expect to see it widely used by students who read neither Greek nor German or who have no access to the *Vorsokratiker* — a rare and expensive work. However, as the translations represent an independent effort, the book should have a certain usefulness also for those who are able to work their way through the Greek and to refer to Diels's, Kranz's, or Burnet's translation whenever they are in doubt.

Spurious and dubious fragments are usually marked as such. Where the text of a fragment would otherwise remain unintelligible, Miss Freeman has skillfully added a few words (in italics) which clarify sense and context. Warning is given that the so-called "Sayings of Democrates" are not universally accepted as Democritean. Yet nothing is said about the fact that as result of Diels's arbitrary arrangement, fragments of Empedocles which are attested for the Second Book of *On Nature* appear before others which had their place in the First Book. (This is frankly admitted by Kranz; Miss Freeman's remarks on this subject in *Companion* 180 are misleading).

I have noticed a few instances (Heraclitus 10,57) in which Miss Freeman omits a part of the original. It also happens in some fragments—though again fortunately not often—that the thought is stultified by a wrong choice of words. Heraclitus does not say that "Beginning and end are general in the circumference of the circle" but that they coincide (*ξυνόν*). In Parmenides 8.23f. the point is that there is neither More nor Less of Being anywhere. This is not brought out; the "More" has disappeared in the translation. In Empedocles 8 "substance" is a very unfortunate rendering of *physis* which means "birth" or "becoming." In another fragment of Empedocles (22) the sentence structure seems to be misunderstood with the result that the most important concept, the "hostility" (scil. of the elements) is suppressed. A part of fragment 21 is translated: "lest in my former statements there was any substance of which the form was missing." This goes far beyond what Empedocles actually says and "substance" is a very dangerous word which should not be gratuitously

introduced into a philosophical text. The translation of Empedocles frgg. 57–61 which Miss Freeman gives in her *Companion* (191) are more accurate and more felicitous than those of the *Ancilla*.

The famous first fragment of Anaximander appears in this form: "The Non-Limited is the original material of existing things; further the source from which existing things derive their existence is also that to which they return at their destruction, according to necessity; for they give justice and make reparation to one another for their injustice, according to the arrangement of Time." In the *Vorsokratiker* it is not suggested that the first and the second sentences are continuous. "Original material" looks like a doxographic paraphrase or interpretation; it overemphasizes the "material" aspect of *arché*. The second sentence destroys the antithesis between Becoming and Perishing (henceforth we may expect to read that the first Greek thinkers were concerned with the "existence" of "existing" things). "Necessity" is much vaguer and less appropriate than Kranz's "Schuldigkeit" — which incidentally has an archaic or pseudoarchaic ring — and "arrangement" is open to a similar criticism.

Perhaps I am no longer criticizing Miss Freeman's work but pointing out the difficulties inherent in any attempt of the kind. No translator could avoid all pitfalls and obviate all possible misunderstandings. On the whole, Miss Freeman's translation may be recommended as being clear, straightforward, and also — generally — accurate.

FRIEDRICH SOLMSEN

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ETHIK IN DER SCHAUSWEISE DER WISSENSCHAFT VOM MENSCHEN UND VON DER GESELLSCHAFT. By LEOPOLD VON WIESE.[1] Berne, Switzerland, A. Francke Ltd., 1947. Pp. 443. 15 Swiss francs.

This voluminous book of the distinguished sociologist is dedicated to the problem of an ethics founded upon anthropology and sociology, anthropology meaning the science of man as an individual and sociology meaning the science of human interrelations. An existence per se of social entities, such as family, race, state, church, is emphatically denied, in strict opposition to Hegelian thought. But its phenomenal reality is well seen, excellently described, and explained by abstract ideas which function in the individual members as causes of social processes; Von

[1] Leopold von Wiese was born in 1876. He taught sociology and economics at the universities of Frankfurt, Köln, and Berlin. He founded the journal *Vierteljahreshefte der Soziologischen Wissenschaft*, which was suppressed by the Nazis. After visiting India, he lectured (1933–1934) at a number of universities in the United States. He has retired to Bad Godesheim now but is still lecturing at the universities of Köln, Bonn, and Mainz.

Wiese speaks of social urges *(soziale Zwänge)*. The social processes are partly direct — that is, between concrete individuals — partly indirect — that is, mediated by the relations to supraindividual collectives. In the latter case I behave toward a human individual as toward an official or a member of a particular state or class or church and so on. A collective guilt does not exist but only the participation of all the individual members of a collective in the guilt which they have imposed upon themselves by passivity — as for instance the Germans did recently (p. 420).

There is no consistency in Von Wiese's thinking when he speaks of moral responsibility, even of the individual person, since he pushes aside the indispensable presupposition of responsibility, namely, freedom of will. He quotes with approval John Stuart Mill, who wants to have the problem of freedom in the sense of indeteriminism replaced by the problem of civil or social liberty (p. 155). But the "replacement" neither solves nor gets rid of the problem of indeterminism, that is, of the freedom of *decision.*

The modern confusion of these different concepts of freedom has contributed much to the undermining of morality. Even if all my *actions* are free in the sense that I myself, and not something or somebody else, am the sole originator of them, I cannot be made responsible for them, nevertheless, as long as I myself have no power to act absolutely independently even of my own nature with which I was born without having chosen it myself. This is the metaphysical core of the problem of freedom in the sense of indeterminism. If I murder just because I am a killer "by nature," then I am just as little responsible for my deed as a tiger whose nature it is to kill or a tile whose nature it is to fall on someone's head in accordance with the natural law of gravity.

Modern thinking has discarded consciousness, reason, spirit in man as the power which elevates him even over his own nature and enables him to choose and to act against it. Instead, modern thinking interprets consciousness, reason, and spirit rather as a powerless reflection and derivation from all that man is and does *naturally*. Consequently ethical studies have changed to biological, psychological, sociological, sexological, political, and historical studies. On such a basis, of course, there is no possibility, either, of escaping from the radical mistake of deriving the moral ought from factual being. Although expressly stressing the wrongness of this kind of derivation, Von Wiese also succumbs to this very mistake by explaining the ought as *mores* of the collective which are opposed to the drives of the individual.

This book is the ripe fruit of lifelong, thorough, and extensive studies. An index is unfortunately lacking; it would make the book much more helpful. This volume is, however, to be highly appreciated because of the author's sincere attempt to find a way out of the almost

hopeless demoralization of our age. But unfortunately its suggestion of looking for a solution in a sober middle way between extremes will not help. There is no middle way between Nietzsche, Marx, Sorel, Pareto — and Christ.

Von Wiese emphasizes the necessity of taking into consideration the diversity of concrete situations to which moral imperatives apply. The implication is that identical moral imperatives may be valid in seemingly different appearances, owing to the diversity of situations to which they apply. But this is certainly impossible, if some "moral" codes are not eliminated from the outset as amoral or immoral. What Nietzsche calls master morality has no common denominator with Christian morality. But just because of this, both cannot be co-ordinated as merely different kinds of the genus, morality. What Nietzsche calls *Herrenmoral* is simply bestiality; it is merely a biological phenomenon; and the positive values flourishing on this ground are aesthetic. A Cesare Borgia can be beautiful just as a wild tiger is. But man as moral being exists essentially as spirit. For Nietzsche spirit is only a derivation from man's animality.

Also the ideal of a collectivistic "morality" is a confusion of a biological with a moral phenomenon; ants and bees represent to our knowledge the most perfect fulfilment of it. But man as an essentially collectivistic being would mean the extinction of the very presupposition of morality, namely the moral person itself.

Von Wiese's stand against the thoughtless idolatry of the group is to be highly appreciated. He speaks of the spiritlessness of the mass *(Massenungeist)* and of the increase of egoism, superficiality, and cruelty due to the decrease of responsibility of the individual within the deified group (pp. 397, 381, 385, and 443).

We are indebted to Von Wiese's great scholarship. But what is needed today in order to find the way out of the jungle is something else: moral *decision,* but not moral decision based on something not yet known and difficult to find. We need moral decision based on insights already known.

MAXIMILIAN BECK

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PHILOSOPHIE DER ERSCHEINUNG. Eine Problemgeschichte. Erster Teil: Altertum und Mittelalter. By HEINRICH BARTH. Basel, Benno Schwabe und Co., 1947. Pp. 390. 28 Swiss francs.

Professor Heinrich Barth, of the University of Basel, has written a monumental first volume of an as yet unfinished work, which he modestly calls a history of a problem, but which, in its searching ramifications, amounts to a history of occidental ontology. The title, *Philosophie der Erscheinung,* is not easily translatable. The dictionary

may render "Erscheinung" by "appearance." But, in English usage, "appearance" may also mean "seemingness," which, to be sure, can be understood as the immediate aspect of the *mundus sensibilis*. Sensibility, however, is only one side of "Erscheinung," as Barth uses the latter word. Another he designates by the word "phenomenon" to which he gives the sharply restricted sense in which science speaks of phenomena. A third aspect is the mythological. And all three together are subsumed under "Erscheinung." To be more explicit I will quote:

"When mythical imagination expands the elements of being which have been apprehended intuitively, into local, regional, or even cosmic hypostases, it is not done arbitrarily, nor in uncertainty. What guides the imagination is a knowledge of 'that which is'" (p. 4). Yet, "the living myth does not exhaust itself in a peculiar type of beholding essence [*Wesensschau*]. Its essences are units of life and of efficaciousness which, each in its particular way, make a claim upon the subject who experiences the myth, placing him into a comprehensive context of efficacious reality within which he appears as a passive element" (p. 5). In contrast, "a 'scientific' attitude toward cosmic being is distinguished from the mythical awareness of the cosmos by the fact that, for that attitude, the *'Erscheinung'* [the intuited reality] has become a simple, unambiguous datum. It has turned into a 'phenomenon,' as the scientific mind will designate it, at a later stage" (p. 7).

So much for the meaning of the title. The content takes its cue from the eidetic depth of appearance, which the myth hypostatizes, but which the philosophical reflection cannot exhaust so easily. Even the sketchiest outline of the book would be much too bulky for a review note. The table of contents may give enough of a hint.

Part I. Appearance *(Erscheinung)* and first ground *(Urgrund)* in philosophy before Socrates.
Part II. Idea and appearance *(Erscheinung)* in the philosophy of Plato.
Part III. Real being (*das wirkliche Sein*) in the ontology of Aristotle.
Part IV. The disappearance of reality in Neoplatonism.
Part V. The concept of reality in the middle ages.
Part VI. Contingent being.

The last part is of especial importance. Among other things, Barth brilliantly and concisely presents Aquinas' doctrine of the contingency of the created world — a doctrine which, in view of scientistic notions of determinism, we can relish again, though not literally make our own. The pity is that the book must stop with the mere raising of the problems implied in contingency. Thus, we do not get the benefit, with regard to these problems, of the profound perspicacity which Barth shows throughout the volume. He simply dismisses one set of questions. He says: "For medieval thought, the subject of all knowledge is — in an ultimate sense — divine reason. It is this [intellect of God] for which contingent being becomes an object [of knowledge]. Here,

we have no opportunity further to expound this philosophico-theological fundamental conception of the old metaphysic. If we had, we should have to try to make clear that there is good philosophical ground for attributing to reason [*Vernunft*] a transcendent significance" (p. 377).

There is good ground, indeed, and Barth has let it be seen in his presentation of Thomas and of Duns Scotus. It would seem to be the ground of unconditional freedom. The danger is that, as previously in the history of the spirit and, therefore, in the secular history of men, true transcendence finds testimony only in myth, myth is taken literally, and the ensuing superstition plays havoc with human freedom. Heinrich Barth of course knows this. May his second volume give him the opportunity of showing, in the context of post-Scholastic philosophy, in what ways the true concept of transcendence can safeguard freedom.

FRITZ MARTI

Marietta College

WELT UND MENSCH IN IHREM IRREALEN AUFBAU: EINE EINFUEHRUNG IN DIE PHILOSOPHIE. By Aloys Müller. Bonn, Ferdinand Dümmlers Verlag, 1947. Pp. 236.

If one's mind is not entirely absorbed by the spectacle of the stereotyped forms of prostration before the golden calf of the scientific method as displayed in our average Introductions to Philosophy, he will find some relief, at least, in this book, which is not only an Introduction but, at the same time, a complete and highly condensed system of philosophy. It is the first such attempt, it seems, in post-war Germany, though even it is but a new version of an older work, last published in 1931.

Investigating the different fields and forms of "actual existence" *(Wirklichkeit),* the book deals exclusively with the problems of the world's *structure,* while leaving those of its ultimate *meaning* to non-philosophical *Weltanschauung;* i.e., it restricts philosophy to what Kant called its scholastic concept. This concept, however, is enriched by the extension of the term "actual existence" not only to real and ideal being, but to the values of history (!), thought (!), ethics, art, and religion as well — a somewhat dubious terminological device which enables Müller to attribute actuality to truth as well as to matter.

The author confesses to and greatly profits from the phenomenological principle that each sphere of existence has its own way of intuitive approach and its own categorial structure. On the other hand and in spite of the analogy he proclaims for all forms of actual existence, his philosophy suffers from that pseudo-Platonic duality and dualism with which the American reader is familiar through

Santayana, but which is also characteristic of the earlier phases of Phenomenology, especially its Munich wing — the heterogeneousness, that is, of essence and real existence, reality proper and value. While recognizing that the worlds of the natural sciences in general and physics in particular are only abstract strata of the real world, Müller sees reality not in its full concretion, but only as the perceived, not yet interpreted world — as if sense perception *pur sang* were more than a product of methodical abstraction. Human action *qua* "real process" thus becomes indistinguishable from any objective event in the world of nature (p. 178). And Müller is compelled to bridge the gap between being valid *(gelten)* and being real by mysterious "values of being" which make the material of reality amenable to the forms of value proper.

Obviously, there is much of Lotzian heritage in the whole setting of these problems. Lotze has been equally influential in the Neo-Kantian theory of values and the earlier Phenomenological theory of ideas. Müller's philosophical attitude is, indeed, reminiscent of that temporarily adopted by Heidegger in his Duns Scotus book of 1916 — a station between Rickert's and Lask's theories of values and categories, on the one hand, and Husserl's Phenomenology on the other. Both authors — Müller as well as Heidegger — are haunted by the ghost of a scholastic past. Identifying Scotism with German profundity, the allegedly sterile Thomistic doctrine with Romanist systematism, Müller reacts most vehemently against the latter. He thus embraces and revives the cause of the Platonic-Augustinian-Scotistic tradition. This is particularly evident in his philosophy of religion. Even so, he usually clings much more firmly than Heidegger ever did to a realism both metaphysical and epistemological. His brand of realism is, in fact, not altogether incompatible with the form-content schematism of those Neo-Kantian idealists to whom subjectivity boils down to a system of categorial functions.

In his own way, however, Müller has fortified his position considerably with the help of Driesch's vitalism and theory of order and Nicolai Hartmann's ontology, by a thoughtful and stimulating use of Scheler's ethics and philosophical anthropology and by insights derived from Hedwig Conrad-Martius' (too little known) metaphysics and philosophy of nature — to mention only a few conspicuous features in this arsenal of German thought.

Hence he gives us in a well-built frame a wealth of excellent detailed observation which space forbids us to present here. While (to put it mildly) his language is often not supple enough to meet the needs of description in a phenomenological analysis, and while the reader is often irritated by the author's posing as a "genuine philosopher," in contrast to the *dei minorum gentium,* the book deserves

and, as it goes on, elicits respect as an honest and thorough philosophical synthesis which answers questions in such a way that new and better ones may be asked.

FRITZ KAUFMANN

University of Buffalo

EUROPEAN IDEOLOGIES. A Survey of Twentieth Century Political Ideas. Edited by FELIKS GROSS with an Introduction by ROBERT M. MACIVER. New York, Philosophical Library, 1948. Pp. xv, 1075. $12.00.

This formidable volume, the work of twenty-six authors, is a comprehensive survey of "European ideologies." The editor defines a "political ideology" as " a system of political, economic, and social values and ideas from which objectives are derived" and asserts that "great political ideologies are as much a European characteristic as symphonic music; no high-ranking composers of either have been born elsewhere." Although this assertion is probably just, the scope of the work prevents its authors from taking account of the thought and influence of such important non-Europeans as John Dewey and Mahatma Gandhi.

The book contains not only chapters on such well-known doctrines as liberalism, fascism, and communism, but also on less familiar movements such as agrarianism, pacifism, and European federalism. For the most part, the discussions are essays in the history of ideas and will be of considerable interest to those who seek to understand European ideologies in their historical evolution. Some are mainly recapitulations; others are more original.

Most of the chapters were written by friendly partizans: the one on anarchism, for example, by an anarchist; the one on Catholic political theory by a Catholic; etc. The main exceptions are the chapters on nazi or fascist and communist ideologies. Although I unequivocally disagree with basic communist tenets and practices, I would have preferred a more objective discussion of communism such as that of Edward Hallett Carr in his judicious book, *The Soviet Impact Upon the Western World.* We can fittingly apply to communism the remarks made by Robert M. MacIver in the introduction: "Back of all the Machiavellian manipulations of these movements by selfish interests and opportunist leaders there lies the eternal quest, however ill directed, for a better life in a better world."

Although the reader of this massive volume will discover a great deal of factual information, some of which is otherwise unobtainable, he will not discover any profound interpretation of the nature, causal role, or epistemological basis of ideologies; he will find nothing so deep probing, for example, as Karl Mannheim's *Ideology and Utopia.*

Nevertheless, there is a considerable amount of theoretical discussion. In general, the contributors reject the Marxian contention that ideologies are mainly the products of underlying economic forces. The editor, Feliks Gross, insists upon the prime importance of moral values and declares that the great problem of our century is the adjustment of moral standards and social relations to the pace of modern technical advancement.

"The ideological struggle in Europe today," he asserts, is mainly "the problem of a choice between the primacy of the individual and primacy of the state,...between the principles of freedom and totalitarianism." It is not the least merit of the present book that some of the contributors, such as Lewis Corey and Rubin Gotesky, help to resolve this problem by sketching the theory of a social, as opposed to a merely individualistic, liberalism.

MELVIN RADER

University of Washington

READINGS IN PHILOSOPHICAL ANALYSIS. Selected and edited by HERBERT FEIGL and WILFRID SELLARS. *New York,* Appleton-Century-Crofts, Inc., 1949. Pp. x, 626. $5.00.

It is to be hoped that the example set by this book will be widely followed. The editors have brought together, from over a dozen different periodicals and from six books, forty-two articles dealing with philosophical problems in the general spirit of modern philosophical analysis. The value of such a thing is obvious. Many of the articles are of first rate importance: all are well worth close study. But few students could afford to have on their shelves all the periodicals containing them.

Eighteen of the articles are dated from 1932 to 1938, nine from 1939 to 1944, nine from 1945 to 1948. The classical article of Frege, "Ueber Sinn und Bedeutung" (1892), an excellent translation of which by Professor Max Black recently appeared in this journal, is the earliest. Many well known names are here: Russell and Moore, Schlick, Carnap and Reichenbach, Tarski and Quine, Nagel and Lewis are only a few of them. In a first collection of this sort, I should have liked to see one of the articles from *Erkenntnis* of Otto Neurath, as a memorial of his vital and stimulating personality.

The topics range over a wide field, from studies of language and mathematics and the problems of induction and probability, to questions concerning empirical science and theoretical ethics. There is of course much controversy among so many writers, though much agreement in mode of approach. All the writers are concerned to clarify problems or to work out techniques for preventing language from engendering confusions. In his wide-ranging and forceful introduction,

Feigl stresses the importance of this task and the dangers it is open to. There is a temptation to be too "reductive" — e. g., to say that matter is nothing but sensations — in one's effort to avoid reading too much into it if one says it is something more. We have, he says, to avoid "Nothing But" and "Something More" and stick to "What is What" (p. 4).

Not all the writers in this volume are logical empiricists. But a logical empiricist who asserts that all genuine questions are either empirical or linguistic has already made a very sweeping assertion of the "Nothing But" kind, and in the early days it was not easy to avoid following it up with other assertions of the same kind in matters of detail. Hempel's paper ("The Logical Analysis of Psychology," pp. 373ff.) did this, as his footnote (p. 373) makes clear. Carnap's articles on reduction were important in enabling one form of this mistake to be avoided; and his article on the "Logical Foundations of the Unity of Science" (pp. 408ff.) makes the point clear.

But this is not the only kind of problem which arises, as Aldrich shows in his discussion (pp. 171ff.) of the difference between Schlick and Ayer on the question whether continuance of a person after the death of his body is an empirical question (as Schlick holds) or one settled by definition (as Ayer holds). It seems to me that there are no very clear principles yet established by means of which it can be determined what questions are linguistic. Schlick's article on the factual a priori (pp. 277ff.) leaves much to be desired in this matter.

Again, there are questions arising in connection with problems which we have not been able to treat with complete satisfaction, such, e.g., as the problem of the justifiability of induction, problems concerning valuation, the problem of freedom. If one ties oneself to a general thesis such as that of logical empiricism — or any other for that matter — one may be tempted to reformulate these problems in such a way as to cut away from them all the aspects that are unmanageable from one's general point of view. Lewis' article "Experience and Meaning" (pp. 128ff.) is a valuable warning against this. Schlick's reply in the next article "Meaning and Verification" (pp. 146ff.) is well worth careful study; it shows that he was ready to consider specific problems in their own right and not merely in the light of a general formula. But it is not clear how far his position in this article is consistent with a thoroughgoing empiricism.

As Lewis shows in another article in this volume ("A Pragmatic Conception of the A Priori"), any empiricist view needs to be supplemented by a recognition that the principles on which it takes its stand cannot themselves be empirically verified. He says, "...in the field of those conceptions and principles which have altered in human history, there are those which could neither be proved nor disproved by any experience, but represent the uncompelled initiative of human

thought. . . . Without this uncompelled initiative no growth of science, nor any science at all, would be conceivable" (p. 293). Ajdukiewicz makes the same point ("The Scientific World-Perspective," pp. 182ff.). Here arise ultimate differences in philosophical outlook; and to these differences, I would suggest, we have to apply the principles Stevenson uses in regard to ethical disputes ("The Nature of Ethical Disagreement," pp. 587ff.). There is an opposition of attitudes. To mark the difference between statements expressing attitudes and statements which, in consequence of adopting a particular attitude, we decide must be accepted as statements of fact, I should prefer to describe the former as expressing proposals, the latter as expressing propositions. Attitudes are not capriciously adopted: they have grounds capable of being discussed. They are not capable of being verified or falsified, nor are the arguments in favor of them or against them mere appeals to the emotions. To classify people as "tough" or "tender" (for example) is only a beginning and may suggest an erroneous view about attitudes. The investigation of the nature of these attitudes, their grounds, and their significance for knowledge is a task for philosophical analysis which is still in the future.

L. J. Russell

Birmingham, England

ELEMENTS OF ANALYTIC PHILOSOPHY. By Arthur Pap. New York, Macmillan Co., 1949. Pp. xviii, 526. $4.60.

This book is written, with a few deviations, from the standpoint of what has been called logical empiricism. As such, it is a reasonably elementary, clear, and, in many ways, informed presentation of the critical issues with which modern philosophical analysts have been concerned. However, the style of the book is marred, in the opinion of the reviewer, by its polemical tone and by the frequency of the aspersions which it casts upon "metaphysics." Philosophical philippics have their place but not, again in the opinion of the reviewer, in a textbook where the reader has the right to expect a judicious presentation of diverse views. This is not to deny, however, that Professor Pap is ever magnanimous in his remarks concerning the philosophic tradition. For example, on page vii, he writes, "Again, much of Aristotle's writings consists of logical analysis. Thus the question of the *Posterior Analytics* 'what is the nature of scientific knowledge?' could be semantically formulated 'what does one mean when one says one has scientific knowledge of a certain state of affairs?' " But I do not really criticize Professor Pap for preferring to speak in his own tongue. Such provinciality is perhaps unavoidable and, in any case, is not more blameworthy in a logical empiricist than in a metaphysician.

Of course, traditional metaphysics is filled with absurd and fantastic

imagery, as is traditional chemistry. It is sometimes relevant to point this out, although, in reiterating the fact, an author is wise to take into account the Principle of Diminishing Returns. What, however, would be illogical would be to suppose that criticism validly directed against Leibniz' doctrine of infinitesimals is valid also in reference to modern mathematical analysis; that criticism of Bacon's analysis of scientific methods *ipso facto* disposes of all methodological analysis; or, *pari passu*, that the refutation of Pythagoreanism, Platonism, or Cartesianism, if this were feasible, would in itself be a refutation of all modern metaphysics.

However, Professor Pap indicates that his low opinion of metaphysics is based upon less flippant consideration than those mentioned so far. He announces it, on page 12, to be his purpose "to show that it is not mere 'narrowness' of interests that leads analytic philosophers to keep away from metaphysics, but positive reasons against the fertility of metaphysics as a cognitive enterprise. The evaluation of these reasons, which mainly grow in the soil of semantics, is itself a concern of analytic philosophy, not of metaphysics." What are these positive reasons which grow in the soil of semantics but which are not an appropriate concern of metaphysics?

On page 330 he says, "If you do not know how to test a statement, you do not know its meaning." On page 322 he tells us that logical positivism *justifiably demands* that a method be in each case described by which statements about unobservables can be empirically tested so that *thereby their cognitive content may be determined*. However, in a footnote on page 324, the author engagingly concedes that the positivist's contention that metaphysical statements are cognitively meaningless follows truistically from positivist usage of "metaphysical" and "cognitive meaning." Is it a tautological formula which is the positive reason against metaphysics? Is metaphysics not concerned with the positive reasons against itself because the positive reasons are, after all, only positivist definitions?

The Elements of Analytic Philosophy has a value, nonetheless, which is independent of its polemic against metaphysics. It contains interesting discussion on such varied topics as probability, implication, synthetic a priori propositions, dispositional predicates, reduction sentences, behaviorism, etc. And Pap's views on these questions cannot be glibly predicted on the basis of his subscribing to the logical empiricist analysis of meaning. For example, he criticizes behaviorism and argues that it is not a corollary of the verifiability theory of meaning. In affirming that a dog has feelings, the analytic philosopher is not asserting anything intrinsically unverifiable. Metempsychosis, he says on page 297, is not logically impossible and therefore it is possible for an analytic philosopher to become a dog and verify a dog's feelings. A carping critic might observe that a dog who had once

been an analytic philosopher might understandably have feelings more confused than is customary with dogs. But, doubtless, this sceptical doubt could be classified away as meaningless.

ARTHUR FRANCIS SMULLYAN

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RETORNO A LA LOGICA CLASICA. Per FRANCISCO JAVIER A. BELGODERE, Mexico, D. F., Editorial Jus, 1947. Pp. 380.

To expose the fallacies of philosophy since the Renaissance the author uses a logic to which he applies the adjectives natural, strict, authentic, intransigeant, severe, traditional (pp. 22, 315, 317, 319, 359, 377), and many others. His thirteen chapters are introduced by a distinction between true and false originality, which confines philosophy to the expository amplification of old truth (pp. 4, 6). Further chapters outline doctrines of Aristotelian logic, refute the systems of Bacon, Descartes, Spinoza, Leibnitz, Comte, and others, suggest precautions against deceptions by fashionable "authorities" and against the torrent of words and corruption of terminology by modern philosophers. Moderate realism is defended and five marks of truth given. Logically disciplined minds will discover such metaphysical absolutes as being, substance, the causes, freedom, life, and God. The defence of metaphysics rests on the "outcome of life, if this is modeled realistically, using right judgments" (p. 198; cf. p. 119). Readers who have fallen "into scientism, seduced by the superficiality of sophisticating arguments" are shown by a few analyses how to "emerge from error by only a few days of critical labor" (p. 200). In cosmology and psychology, hylomorphism with its *materia prima* and substantial forms and the immateriality of the soul are approved. In sociology, economic liberalism, socialism, and communism are rejected in favor of a plan by which everything is put into its proper place in conformity with the economic, political, and spiritual ends of society. In this plan, academic freedom does not imply liberty to teach both truth and error (p. 293; cf. p. 168); and religious "freedom of conscience, in the sectarian fashion, is contrary to logic and to social cohesion in countries of uniform and true religion; it is tolerable in mixed countries or where religions invented by men predominate" (p. 299). History, like psychology, reveals the identity of human nature and finds its meaning in divine design (p. 312). Today's lax morality tries to divorce actions from any transcendent finality (p. 317). Two final chapters discuss spurious philosophy and contemporary philosophy, which turns out to be spurious as well.

"Originality" and "subjectivism" are the chief terms used to condemn modern philosophy. "True" originals revitalize truth which is

old, because eternal (pp. 4-6). "False" originals confuse all terminology by changing perennial usage. They use the tactics of propaganda, figures of speech, a false reason, ambiguous phrases, appeals to science; they are motivated by pride; they deify their own ideas; they surround themselves by sycophants (pp. 14-20); they undermine the established order (p. 25), etc. They are subjectivists. But since the term "subjectivist" is applied to Bacon, Descartes, Comte, Husserl, moral relativists, and even to cosmological schools differing from hylomorphism (pp. 240, 344), the common meaning which this term has here must be "differing from traditionalism." Hence, the author's distinctive argument reduces to one which is both circular and unproductive of agreement: traditional philosophy is true, because, when tested by traditional philosophy, nontraditional philosophies are false. Those who disregard it or advance arguments against it can do so only at the cost of being termed false originals or subjectivists. After all, it was not the purpose of the volume to plead for, or to record, a return to classical logic, but to induce "beneficial correction, and for this reason its subject is Immortal Philosophy...not merely as object of meditation...[but] in operation against fallacious systems" (p. 56).

O. A. KUBITZ

University of Illinois

GEORGE SYLVESTER MORRIS. His Philosophical Career and Theistic Idealism. By MARC EDMUND JONES. Philadelphia, Donald McKay Co., 1948. Pp. xvi, 430.

George Sylvester Morris is the translator of Überweg's great history, Dewey's teacher at Johns Hopkins, a theistic idealist, and author of books on British philosophy, Kant, Hegel, and Christianity. Morris holds an established, if relatively minor, place in the history of American philosophy.

Mr. Jones recognizes his indebtedness to R. M. Wenley's *The Life and Work of George Sylvester Morris* (1917) and admits that he has discovered no new source material unknown to Wenley. But Jones criticizes Wenley for a somewhat subjective and arbitrary account of Morris' thought, which reads in certain pet preconceptions of Wenley's rather than letting Morris speak for himself. For this reason and because of the relative neglect into which Morris has fallen in recent years, Jones deems himself justified in his fresh attempt.

The present work, like Wenley's, is sympathetic with Morris' main theses. It renders the facts about Morris which Wenley had discovered available to the present generation of students. It reprints Morris' article on Trendelenburg from *The New Englander* (1874) and prints a previously unpublished draft of an introduction to Hegel's *Philosophy of the State and History.*

While Jones is less arbitrary than Wenley in interpreting Morris, he sticks so close to the letter that the spirit of Morris' basic argument for idealism fails to stand out in a clear logical structure. Nor is his relation to other American idealists sufficiently considered. As a biography the book is valuable. There is a complete bibliography. On p. 240 the umlaut is missing from "Tübingen."

EDGAR SHEFFIELD BRIGHTMAN

Boston University

KNOWING AND THE KNOWN. By JOHN DEWEY and ARTHUR J. BENTLEY. Boston, Beacon Press, 1949. Pp. xiv, 334. $4.00.

The purpose of this book is announced as "the attempt to fix a set of leading words capable of firm use in the discussion of 'knowings' and 'existings' in that specialized region of research called the theory of knowledge" (p. xi).

The method consists largely in the collocation (usually wth disapproving comment) of extracts from the writings of Carnap, Morris Cohen, Russell, Quine, and many others. This is said to yield "a startling diagnosis of linguistic disease not only in the general epistemological field, where everyone would anticipate it, but also in the specialized logical field, which ought to be reasonably immune" (p. xii). The chief fault with which these writers are charged is that of vicious abstraction — a refusal to understand "that knowings are always and everywhere inseparable from the knowns — that the two are twin aspects of common fact" (p. 53).

The fruits of the recommended method (the "transactional approach") are displayed in a penultimate chapter entitled "A Trial Group of Names." The list includes the following items:

Knowings: Organic phases of transactionally observed behaviors. Here considered in the familiar central range of namings-knowings. The correlated organic aspects of signalings and symbolings are in need of transactional systematization with respect to namings-knowings.

Knowns: Environmental phases of transactionally observed behaviors. In the case of namings-knowings the range of the knowns is that of existence within fact or cosmos, not in a limitation to the recognized affirmations of the moment, but in process of advance in long durations.

"Organic" does not occur in the list, but for "organism" we are given:

Organism: Taken as transactionally existent in cosmos. Presentations of it in detachment or quasi-detachment are to be viewed as tentative or partial.

And for "environmental" we turn to:

Environment: Situations, events, or objects in connection (*q.v.*) with organism as object. Subject to inquiry physically, physiologically, and, in full transactional treatment, behaviorally.

This leads to:

Connection: To apply between objects under naming. See *Reference* and *Relation.*

and so to:

Reference: Behavioral application of naming to named. See *Connection* and *Relation.*

and finally:

Relation: Various current uses, ranging from casual to ostentatious; rarely with any sustained effort at localization of the "named," as is shown by ever-recurrent discussions (and, what is worse, evasions) as to whether relation (assumed to have a certain existence somewhere as itself factual) is "internal" or "external." Suggested by us to name system among words, in correlation with reference and connection (*q.v.*).

This may serve as sufficient indication of the "firm names" which are offered for acceptance. To appreciate the "sustained observation" (p. 79) and "postulational background" (p. 80) of the method producing these results, the reader must turn to the book itself.

MAX BLACK

Cornell University

RECONSTRUCTION IN PHILOSOPHY. By JOHN DEWEY. Enlarged edition, with a new introduction by the author. Boston, Beacon Press, 1948. Pp. xli, 224.

The present volume contains the text of the original edition of 1920, which is printed without revision and with which the readers of this review may be presumed to be familiar. The text is prefaced by a new introduction, written especially for the present edition "in the firm belief that the events of the intervening years have created a situation in which the need for reconstruction is vastly more urgent than when the book was composed" (p. v).

The introduction is, in the main, a restatement of a familiar pragmatic theme: namely, the social ills from which twentieth-century man suffers are largely due to his failure to extend to "received institutional customs" and traditional morals the techniques of inquiry and methods of validation that have proved so successful in the field of the physical sciences. It is also a vigorous defense of the authority of scientific method from the attacks currently being made upon science by allegedly suprascientific authorities. Pointing out the absurdity involved in attempting to trace our predicament solely to the overdevelopment of science, Dewey notes that our critical situation is, rather, the outcome of the fact that "science, instead of operating alone and in a void, works within an institutional state of affairs developed in pre-scientific days, one which is not modified by scientific inquiry into the moral principles that were then formed and were, presumably, appropriate

to it" (p. xxiv). The so-called "problem of the atomic bomb," e.g., exists not simply because of the success of physical science in producing atomic fission; it exists because of this success *and* because of the continuing presence of the "received institutional custom" of war — something which long antedates the rise of modern science.

The way out of our difficulties does not lie in passive acquiescence in the authority of prescientific morals. It is fruitless to deplore the increasing "secularization" of morals consequent upon the impact of science on old institutional habits and beliefs, to explain the loss of authority of traditional morals by recourse to the doctrine of the inherent depravity of human nature, to look for salvation from some authoritarian institution. We need more science, not less; we need to extend the dominion of the method and spirit of science over the realm of *human* affairs. The genuinely modern morality that will be thus produced will have the significance and the authority "nominally assigned to morals, but not now exercised in fact by those morals that have come down to us from a pre-scientific age" (p. xxxiii). It is, of course, to assist in this task that twentieth-century philosophy is called.

One feels heartened and refreshed by Dewey's stout defense of the significance for human life of a liberally conceived scientific method. But optimism is tempered by two reflections. In the first place, can philosophers do much about the problems of men, until they themselves can come to precise agreement as to the meaning, competence, and limitations (if any) of science? Until such agreement is reached, of what value is it for philosophers of varying persuasions to join in issuing blanket approvals of something called "science"? Such a procedure would seem to ignore the prudent warning, given in the main text of this volume, of "the impotency and harmfulness of any and every ideal that is proclaimed wholesale and in the abstract" (p. 129). Furthermore, even presuming such agreement, is there not the additional and even more serious problem of reaching in practice a position where a "scientific" approach has a genuine possibility of being utilized — particularly in our dealings with those who style themselves "scientific socialists"?

W. M. SIBLEY

University of Manitoba

THE VALUES OF LIFE. By E. J. URWICK. Edited with an Introductory Essay on His Social Philosophy, by JOHN A. IRVING. Toronto, Canada, University of Toronto Press, 1948. Pp. lxv, 244.

In an excellent introductory essay Professor Irving draws a picture of Professor Urwick as a man equally at home in the practical problems of contemporary society and the academic problems of the university, a man with unusual capacity to put ideals to work. In addition to

the practical fruits of his labors, in the words of Professor Irving, "perhaps his greatest contribution consisted in his provision of a philosophy of social work" (p. xix). "Urwick's social philosophy, considered in its most general aspect, is a running critique of that civilization [Western civilization] in terms of the ultimate moral and spiritual values he had discovered in Platonism" (pp. xxxiii–xxxiv).

From this vantage point Professor Urwick deftly displays the shallowness of much of our rationalizing about Christian values. He exposes many inadequacies with, and internal inconsistencies in, the effective ethics of Western civilization.

The small portions of this book devoted to the positive expression and defense of his own view are less satisfactory. He has seen what is perhaps the fundamental question in any inquiry concerning value. What is the guarantee of the validity of any set of values? His answer to this question is a version of intuitionism. "Let it first be noted that we are here concerned with intuition only as a faculty which guides and informs the practical mind. We may therefore regard it as a faculty which sees and recognizes the reality of goodness, the values which have absolute worth" (pp. 163–164). This position is rendered dialectically more secure by the qualification that "since the vision is the vision of the good, the seer must himself be good" (p. 165). This is undoubtedly an adequate guarantee for the seer who has had the vision. For those without the vision it offers no guarantee whatever. It offers them no guide in their efforts to become good until they have already done so. At that point they no longer need it. I find a further difficulty in reconciling this doctrine of intuition with a conclusion apparently reached by Professor Urwick in his analysis of the effective content of our practical minds. "We are now brought face to face with the familiar difficulty of ethics: all moral values are relative; they are a matter of time and place, of period and geography; and therefore they can have no more than a pragmatic validity" (p. 34).

It is to be regretted that Professor Urwick did not live to complete the book. His excellent exposure of contemporary confusions about values might have led to a more convincing positive contribution.

JOHN W. BLYTH

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BOOKS RECEIVED

(Listing does not preclude subsequent reviews.)

LANGUAGE AND PHILOSOPHY. Studies in Method. By MAX BLACK. Ithaca, New York, Cornell University Press, 1949. Pp. xiii, 264. $3.50.

THE VITAL CENTER. The Politics of Freedom. By ARTHUR M. SCHLESINGER, JR. Boston, Houghton Mifflin Co., 1949. Pp. xiv, 274. $3.00.

PHILOSOPHY OF NATURE. By MORITZ SCHLICK. Translated by AMETHE von ZEPPELIN. New York, Philosophical Library, 1949. Pp. xii, 136. $3.00. — This small book consists mainly of an outline which was used by Schlick for his course in the philosophy of science. It is a concise statement of his views which will be valuable to those who find his other writings inaccessible.

THE NEW RENAISSANCE OF THE SPIRIT. By VINCENT A. McCROSSEN. New York, Philosophical Library, 1949. Pp. x, 251. $3.00.

THE EDUCATION OF FREE MEN. An Essay toward a Philosophy of Education for Americans. By HORACE M. KALLEN. New York, Farrar, Straus and Co., 1949. Pp. xx, 332. $5.00. — The chapter headings include "That Education Has Become Big Business," "The School in the Struggle for Democracy," "Personality and the Religious Interest," and "The Liberal Education of the Modern Man."

INTRODUCTION TO COMPARATIVE MYSTICISM. By JACQUES DE MARQUETTE. New York, Philosophical Library, 1949. Pp. 229. $3.75. — Though somewhat sketchily written, this series of lectures provides a helpful foundation for a comparative study of the mystical aspects of Hindu, Buddhist, Christian, and Islamic thought.

THE PROBLEMS OF PHILOSOPHY. By SATISCHANDRA CHATTERJEE. Calcutta, Das Gupta & Co., Ltd., 1949. Pp. xviii, 345. No price given.

THE DRIVING POWER OF WESTERN CIVILIZATION. The Christian Revolution of the Middle Ages. By EUGEN ROSENSTOCK-HUESSY. Preface by KARL W. DEUTSCH. Boston, Beacon Press, 1949. Pp. xiv, 126. $2.00. — A reprint of part of the same author's *Out of Revolution: Autobiography of Western Man,* published in 1938.

THE FOUNDATIONS OF KNOWLEDGE. By A. C. MUKERJI. Privately printed. Pp. 16.

SYMBOLIZATION AND FICTIONAL REFERENCE. A study in Epistemology. By HANS REGNÉLL. Lund, Sweden, C. W. K. Gleerup, 1949. Pp. 223. Kr. 9.50. — The general theory of symbols with special attention to related epistemological questions. The last part of the book discusses applications to

mathematics, physical science, metaphysics, and religion. The doctrines of other writers on the subject are appraised and an extensive bibliography is provided.

NATURE. By JOHN STUART MILL. Eugene, Oregon, University of Oregon Co-operative Store, 1949. Pp. 27. 25 cents. — The first number in a projected series of philosophical reprints.

LOGIC AND THE BASIS OF ETHICS. By ARTHUR N. PRIOR. Oxford, Oxford University Press, 1949. Pp. xii, 111. $1.75. — A brief examination of the history of the controversy between ethical naturalism and its opponents from the time of Hobbes to the present day.

GENERAL THEORY OF VALUE. Its Meaning and Basic Principle Construed in Terms of Interest. By RALPH BARTON PERRY. Cambridge, Massachusetts, Harvard University Press, 1950. Pp. xvii, 702. $7.50. — An unaltered reprint of the first edition (1926).

THE DESIGN OF DEMOCRACY. By LAURENCE STAPELTON. New York, Oxford University Press, 1949. Pp. 301. $4.00. — A philosophical discussion of the principles and the context of a democratic society.

THE IDEA OF USURY. From Tribal Brotherhood to Universal Otherhood. By BENJAMIN N. NELSON. Princeton, Princeton University Press, 1949. Pp. xxi, 258. $3.00.

AMERICAN DEMOCRACY AND NATURAL LAW. By CORNELIA GEER LE BOUTILLIER. New York, Columbia University Press, 1950. Pp. viii, 204. $3.00. — An examination "of the sources and meaning of American Democracy."

PHILOSOPHY FOR PLEASURE. By HECTOR HAWTON. New York, Philosophical Library, 1949. Pp. x, 214. $3.75. — A simple but clear popularization.

FUNDAMENTALS OF SYMBOLIC LOGIC. By ALICE AMBROSE and MORRIS LAZEROWITZ. New York, Rinehart & Co., Inc., 1949. Pp. x, 310. $5.00.

THE CONCEPT OF MIND. By GILBERT RYLE. London, Hutchinson's University Library, 1949. Pp. 334. 12*s.* 6*d.*

SCIENCE AND CIVILIZATION. Edited by ROBERT C. STAUFFER. Madison, Wisconsin, University of Wisconsin Press, 1949. Pp. xvi, 212. $2.50.

EDUCATION LIMITED. By GUSTAV E. MUELLER. Norman, Oklahoma, University of Oklahoma Press, 1949. Pp. xii, 141. $2.75.

THE THEORY OF LITERARY KINDS. Vol. II: The Ancient Classes of Poetry. By JAMES J. DONOHUE. Dubuque, Iowa, The Loras College Press, 1949. Pp. viii, 207. $3.50.

THE RELATIONSHIP OF PRIMITIVE MORALITY AND RELIGION. Being the Frazer lecture delivered within the University of Glasgow on 6th December 1949. By ALEXANDER MACBEATH. Glasgow, Jackson, Son & Company, 1949. Pp. 43. 3*s.* 6*d.* — The supposition that morality must have a religious sanction is here exposed as a dogma, credible only so long as confusions and ambiguities prevent an understanding of the issue and an unprejudiced examina-

tion of anthropological evidence. MacBeath sets a high standard for brief, suggestive, and judicious criticism of social anthropology.

THE CODE OF MAIMONIDES. BOOK FOURTEEN: THE BOOK OF JUDGES. Yale Judaica Series, Vol. III. Translated from the Hebrew by ABRAHAM M. HERSHMAN. New Haven, Yale University Press, 1949. Pp. xv, 335. $5.00.

GOLDEN JUBILEE SOUVENIR. By VARIOUS AUTHORS. Tiruvannamalai, S. India, Sri Ramanasraman, 1949. Pp. v. 376. $4.20.

ON WORLD-GOVERNMENT OR DE MONARCHIA. By DANTE ALIGHIERI. Translated by HERBERT W. SCHNEIDER. With an Introduction by DINO BIGONGIARI. New York, The Liberal Arts Press, 1949. Pp. xiv, 61. 40 cents.

FUNDAMENTAL PRINCIPLES OF THE METAPHYSIC OF MORALS. By IMMANUEL KANT. Translated by THOMAS K. ABBOTT. With an Introduction by MARVIN FOX. New York, The Liberal Arts Press, 1949. Pp. xvi, 80. 50 cents.

MENO. By PLATO. Translated by BENJAMIN JOWETT. With an Introduction by FULTON H. ANDERSON. New York, The Liberal Arts Press, 1949. Pp. 61. 35 cents.

TIMAEUS. By PLATO. Translated by BENJAMIN JOWETT. With an Introduction by GLENN R. MORROW. New York, The Liberal Arts Press, 1949. Pp. xxiv, 75. 50 cents.

HUMAN RIGHTS. Comments and Interpretations. A Symposium edited by UNESCO, with an Introduction by JACQUES MARITAIN. New York, Colulmbia University Press, 1949. Pp. 288. $3.75.

ALBERT EINSTEIN. Philosopher-Scientist. Edited by PAUL ARTHUR SCHLIPP. Evanston, Illinois, The Library of Living Philosophers, 1949. Pp. xvi, 781. $8.50.

THE GOOD LIFE. By E. JORDON. Chicago, The University of Chicago Press, 1949. Pp. vi, 453. $5.00.

THE WORKS OF GEORGE BERKELEY BISHOP OF CLOYNE. Vol. II: The Principles of Human Knowledge. Edited by T. E. JESSOP. Edinburgh, Thomas Nelson and Sons, Ltd., 1949. Pp. viii, 294. 30*s*.

THE COMMUNITY OF MAN. By HUGH MILLER. New York, Macmillan Company, 1949. Pp. vi, 169. $3.00.

THE PHILOSOPHY OF PERSONALISM. A Study in the Metaphysics of Religion. By ALBERT C. KNUDSON. Boston, Boston University Press, 1949. Pp. 438. $2.75.

THE WAYS OF GENIUS. By RADOSLAV A. TSANOFF. New York, Harper & Brothers, 1949. Pp. xviii, 310. $3.50.

TREATISE ON VALUES. By SAMUEL L. HART. New York, Philosophical Library, 1949. Pp. 165. $3.75.

MAN AND THIS MYSTERIOUS UNIVERSE. By BRYNJOLF BJORSET. New York, Philosophical Library, 1949. Pp. viii, 174. $3.75.

SCIENCE AND THE MORAL LIFE. Selected Writings by MAX OTTO. Preface by EDUARD C. LINDEMAN. New York, New American Library, 1949. Pp. 192. 35 cents. — A selection of previously published writings, such as "The Ethical Neutrality of Science," "Scientific Method and the Good Life," and "Scientific Humanism."

THE PHILOSOPHY OF PROCLUS. The Final Phase of Ancient Thought. By LAURENCE JAY ROSÁN. New York, "Cosmos," 1949. Pp. x, 271. No price given.

VALUE. A Cooperative Inquiry. Edited by RAY LEPLEY. New York, Columbia University Press, 1949. Pp. x, 487. $6.00.

THE NATURE AND TECHNIQUE OF UNDERSTANDING. Some Fundamentals of Semantics. By HUGH WOODWORTH. Vancouver, British Columbia, Wrigley Printing Co., Ltd., 1949. Pp. viii, 142. $4.00.

THE PERENNIAL SCOPE OF PHILOSOPHY. By KARL JASPERS. New York, Philosophical Library, 1949. Pp. iv, 188. $3.00. — In six lectures, Jaspers outlines his philosophical position, reinterprets the tradition of Western philosophy in terms of his position, and in so doing defines the scope and function of philosophy.

FORGOTTEN RELIGIONS. Including some living primitive religions. A Symposium. Edited By VERGILIUS FERM. New York, Philosophical Library, 1950. Pp. xvi, 392. $7.50. — This book consists of a series of essays, by specialists, on "forgotten" religions of the past and the present. Among the former group are the religion of the Hittites, Mithraism, and the old Norse religion; among the latter are Siberian Shamanism, the religion of the Eskimos, and the religion of the Navajo Indians.

LETTERS OF THOMAS CARLYLE TO WILLIAM GRAHAM. Edited by JOHN GRAHAM, JR. Princeton, Princeton University Press, 1950. Pp. xx, 86. $2.50.

LA PENSEE DE SAINT THOMAS D'AQUIN. Par L. JUGNET. Paris, Bordas, 1949. Pp. xv, 265. No price given. — A collection of extracts with commentaries and bibliographies.

TRAITE DES VERTUS. Par VLADIMIR JANKELEVITCH. Paris, Bordas, 1949. Pp. 804. No price given.

LE DEUXIEME SEXE. Vol. II: L'Experience Vecue. Par SIMONE DE BEAUVOIR. Paris, Gallimard, 1949. Pp. 577. 590 francs.

INTRODUCTION A UNE PHENOMENOLOGIE DE NOTRE EPOQUE. Par ENRICO CASTELLI. Paris, Hermann & Cie., 1949. Pp. 88. 1200 francs.

PHILOSOPHIE DER LEBENSZIELE. By ALEXANDER PFÄNDER. Aus dem Nachlass herausgegeben von Wolfgang Trillhaas. Göttingen, Bandenhoeck & Ruprecht, 1948. Pp. 187. 12 marks.

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GRUNDZÜGE EINER METAPHYSIK DER ERKENNTNIS. By NICOLAI HARTMANN. Berlin, Walter de Gruyter & Co., 1949. Pp. xvi, 572. No price given.

MARTIN HEIDEGGERS EINFLUSS AUF DIE WISSENSCHAFTEN. By Various Authors. Bern, A. Francke, 1949. Pp. 174. 14.50 Swiss francs. — Eleven essays on topics ranging from theology to physics, presented to Heidegger on the occasion of his seventieth birthday.

AMITABHA. The Life of Naturalness. By KENRYO KANAMATSU. Higashi Honganji, Kyoto, Otani Publishing Co., Ltd., 1949. Pp. x, 75. No price given. — A brief description of the viewpoint of the Shin sect in Japanese Buddhism.

NOTES

AMERICAN PHILOSOPHICAL ASSOCIATION

Professor Milton Nahm, Secretary of the Eastern Division of the American Philosophical Association, reports the vote of the Division on the Resolutions recently submitted to its members as follows:

I. WHEREAS the democratic operation of our Association entails equality of treatment for all members, which is not provided by meetings at places where there is racial segregation;
BE IT RESOLVED THAT meetings of the Eastern Division of the American Philosophical Association not be held at colleges or universities where it is impossible to provide non-segregated accommodations.

Endorsed, 355 to 27.

II. WHEREAS it is the professional responsibility of philosophy teachers to seek and teach the truth; and

WHEREAS there has been increasing pressure in many areas against minority or dissenting opinion; and

WHEREAS this pressure operates in institutions of higher education to prevent free inquiry into unpopular opinions and to use of the criterion of conformity in judging teachers; and

WHEREAS the development of uniformity of thought enforced by legal or economic penalties or intimidation would make it impossible for philosophers to fulfill their professional duties;

BE IT RESOLVED THAT the Eastern Division of the American Philosophical Association reaffirm the professional duty and the right of philosophers to examine and express their independent evaluation of any form of philosophical thought whatsoever, no matter what the bearings of that philosophy on controversial issues of social policy.

Endorsed, 372 to 9.

III. WHEREAS there have been widespread attacks upon the freedom of teachers to exercise their civil rights, as evidenced in dismissals, loyalty oaths, special legislation for inquiries into teachers, vilification of individuals in newspapers and magazines;

BE IT RESOLVED THAT the Executive Committee of the Eastern Division set up a committee of three on Academic Freedom, empowered and directed to receive complaints of infringement of academic freedom of members of the Association or of their dismissal or discrimination against them on the grounds of the exercise of their civil rights; to cooperate with investigations by other responsible bodies; to assist in the attempt to right any injustice by resolution, publicity, and participation in legal action amicus curiae.

Not endorsed, 137 to 229.

IV. WHEREAS the Pacific Division of the American Philosophical Association by *unanimous* vote adopted the following resolution and instructed its secretary to transmit it to President Raymond B. Allen of the University of Washington: "That the members of the Pacific Division of the American Philosophical Association express their confidence in the integrity, as man and teacher, of Professor Herbert J. Phillips of the Department of Philosophy of the University of Washington, and affirm their strong conviction that membership or nonmembership in a legal political party is not itself sufficient grounds for determining fitness for academic employment" (Proceedings of the American Philosophical Association, 1948–49, pp. 477–78);

BE IT RESOLVED THAT the Eastern Division of the American Philosophical Association endorses the principle embodied in the resolution of the Pacific Division that an individual teacher be judged in terms of his own actions and not in terms of the action of others.

BE IT FURTHER RESOLVED THAT the Eastern Division of the American Philosophical Association call upon the University of Washington to reconsider its decision in the case of Professor Phillips in the light of this principle and of the expressed judgment of those of his professional colleagues best qualified to pass on his professional integrity.

Endorsed 297 to 71.

EAST-WEST PHILOSOPHERS' CONFERENCE

The second East-West Philosophers' Conference was held at the University of Hawaii from June 20 to July 29, 1949, in conjunction with the summer session at the University. A threefold program was conducted, consisting of the Conference itself, courses in Oriental and comparative philosophy in the summer school, and a series of ten public lectures. (Five of these public lectures were given by Professor Filmer S. C. Northrop on "The Scientific and Philosophical Foundations of Western Culture," and five by representatives of Oriental philosophy.) The Conference was attended by twenty-two members — eleven representing Eastern philosophy and eleven Western — and twenty-five associate members, most of whom were younger members of departments of philosophy in colleges and universities in America. The program consisted of the reading and discussion of twenty-two formal papers. The work both at the conference and in the summer school courses was divided into three main divisions, dealing, respectively, with comparative methodology, metaphysics, and ethics and social philosophy.

A preliminary report of the Conference, which consists of an introductory statement of the program and the results of the Conference, along with abstracts of all the papers presented, is now in publication and will be sent by the University of Hawaii to all members of the American Philosophical Association. Plans are underway for the publication of a volume giving a complete report of the Conference, this volume to consist of a comprehensive introduction and statement of conclusions, as well as the complete text of all papers presented and the reports of the seminars in comparative methodology, metaphysics, and ethics and social philosophy. The establishment of a journal in Oriental and comparative philosophy is contemplated in the relatively near future. Participants in the Conference expressed the view that there is a need for such a specialized journal, not only because of the lack of available facilities for publication of articles in the

field, but also to stimulate interest and research and to provide a medium through which the work of the Conference and the interest it aroused might be continued.

ERRATUM

We regret that in a quotation from Mr. E. F. Carritt's *Ethical and Political Thinking* in the PHILOSOPHICAL REVIEW, May, 1949, page 268, line 29, an essential word is omitted. The quotation should read: "there is no more in common between moral excellence and what is excellently suited to satisfy desire than between being well and being well beaten."

ARTICLES IN CURRENT PHILOSOPHICAL PERIODICALS

MIND LVIII 232: *Nicolai Hartmann,* German Philosophy in the Last Ten Years; *Roderick Firth,* Sense-Data and the Percept Theory (I); *S. Hampshire,* Fallacies in Moral Philosophy; *J. J. C. Smart,* The River of Time; *Arthur Hatto,* "Revolution": An Enquiry into the Usefulness of an Historical Term; *Peter Thomas Geach,* On Rigour in Semantics; *R. M. Martin,* Mr. Geach on Mention and Use; *C. D. Rollins,* Are There Indubitable Existential Statements?; *A. F. Peters,* R. M. Hare on Imperative Sentences: A Criticism.

THE JOURNAL OF PHILOSOPHY XLVI 21: *Hugh R. King,* Aristotle and the Paradoxes of Zeno; *Evelyn Masi,* A Note on Lewis' Analysis of the Meaning of Historical Statements. 22: *Y. H. Krikorian,* Empiricism and the Mind; *Jack Kaminsky,* Analytic and Synthetic Moral Judgments; *J. E. Ledden,* Contextual and Intrinsic Freedom. 23: *Dickinson S. Miller,* Hume's Deathblow to Deductivism. 24: *Lewis K. Zerby,* Some Remarks on the Philosophy of Law; *May Brodbeck,* The New Rationalism: Dewey's Theory of Induction. 25: *R. Bruce Raup,* Method in Judgments of Practice; *Julius R. Weinberg,* Nicolaus of Autrecourt: A Reply. 26: *B. A. G. Fuller,* The Messes Animals Make in Metaphysics; *Hugues Leblanc,* The Semiotic Function of Predicates.

PHILOSOPHY AND PHENOMENOLOGICAL RESEARCH X 2: *Charles W. Hendel,* Goethe's *Faust* and Philosophy; *Aron Gurwitsch,* Gelb-Goldstein's Concept of "Concrete" and "Categorical" Attitude and the Phenomenology of Ideation: *Ludwig Landgrebe,* Phenomenology and Metaphysics; *N. A. Mashkin* (translated from the Russian), Eschatology and Messianism in the Final Period of the Roman Republic; *Prabas Jiban Choudhury,* The Problem of Form and Content in Physical Science; *Guenthner Anders-Stern,* The Acoustic Stereoscope; *Maurice Natanson,* H. B. Alexander's Projection of a Categoriology; *James F. Anderson,* Is Scholastic Philosophy Philosophical?; *G. Watts Cunningham,* A Reply; *James F. Anderson,* Remarks on Professor Cunningham's "Reply."

THE REVIEW OF METAPHYSICS III 1: *Rulon S. Wells,* The Existence of Facts; *John W. Yolton,* The Ontological Status of Sense-Data in Plato's Theory of Perception; *Anita Dunlevy Fritz,* Malebranche and the Immaterialism of Berkeley; *Paul Weiss,* Good and Evil; *Julian Hartt,* On the Possibility of an Existentialist Philosophy; *Charles Hartshorne,* On the Growth of Modern Philosophy: An Examination of Otis Lee's Existence and Inquiry. 2: *A. Robert Caponigri,* Philosophy and History; *George Bosworth Burch,* Anaximander, The First Metaphysician; *Hugh R. Smart,* Anselm's Ontological Argument:

Rationalistic or Apologetic?; *Robert Sternfeld,* The Unity of Hume's Enquiry concerning Human Understanding; *H. F. Hallett,* On a Reputed Equivoque in the Philosophy of Spinoza; *Errol E. Harris,* The Philosophy of Nature in Hegel's System; *John E. Smith,* Kant, Paton and Beck; *Brand Blanshard,* A Philosophical Logician.

ETHICS LX 1: *Everett W. Hall,* The "Proof" of Utility in Bentham and Mil; *A. L. Macfie,* What Kind of Experience Is Economizing?; *C. V. Salmon,* The Notion of Responsibility; *William F. Quillian, Jr.,* The Problem of Moral Obligation; *Lucius Garvin,* Normative Utilitarianism and Naturalism.

PHILOSOPHY OF SCIENCE XVI 4: *P. Jordan,* On the Process of Measurement in Quantum Mechanics; *Victor F. Lenzen,* Concepts and Reality in Quantum Mechanics; *Henry Margenau,* Reality in Quantum Mechanics; *Donald H. Menzel and David Layzer,* The Physical Principles of the Quantum Theory; *Oliver L. Reiser,* A Resolution of the "East-West Problem" by way of a Scientific Humanism; *George R. Geiger,* A Note on the Naturalistic Fallacy; *Leonard Linsky,* Some Notes on Carnap's Concept of Intensional Isomorphism and the Paradox of Analysis; *Rudolf Carnap,* A Reply to Leonard Linsky.

SCIENCE AND SOCIETY XIII 4: *E. J. Hobsbawm,* Trends in the British Labor Movement; *Israel Epstein,* Main Directions in Chinese Labor; *C. West Churchman* and *Russell L. Ackoff,* The Democratization of Philosophy; *E. Burke Inlow,* Science and Progress in 17th Century England; *Herbert Aptheker,* The Washington-Du Bois Conference of 1904.

THE PERSONALIST XXXI 1: *The Editor,* China: Matrix of Social and Political Ideas; *Marian Goodlander,* Significant Trends in Ancient Egypt; *Herbert Sanborn,* Philosophies and Psychologies; *Lionel Stevenson,* The Intellectual Novel in the Nineteenth Century, Part I; *Emily Gardiner Neal,* Has the Church Failed?; *Max Kaufman,* Modern Science and Religion; *Emory S. Bogardus,* The Philosopher, the Painter, and the Portrait.

THOUGHT XXIV 95: *F. X. Murphy,* Exporation beneath St. Peter's; *N. S. Timasheff,* The Basic Conflict of Our Age; *Joseph P. Kelly,* Science Ventures into Philosophy; *Robert J. Henle,* Gilson the Philosopher; *William R. O'Connor,* The Nature of the Good; *Balduin V. Schwarz,* Dietrich von Hildebrand on Value; *Gerald G. Walsh,* A Dante House in Washington.

THE JOURNAL OF AESTHETICS AND ART CRITICISM VIII 2: *P. A. Michelis,* Space-Time and Contemporary Architecture; *Kathi Meyer-Baer,* Musical Iconography in Raphael's Parnassus; *Gertrude Lippincott,* A Dancer's Note to Aestheticians; *Rudolf Arnheim,* The Priority of Expression; *Erich Auerbach,* Vico and Aesthetic Historism; *Wolfang Stechow,* Justice Holmes' Notes on Albert Dürer; *Patrick Romanell,* A Comment on Croce's and Dewey's Aesthetics; *Philip Merlan, Jared S. Moore, Winslow Ames,* Letters Pro and Con.

THE THOMIST XII 4: *Walter Farrell,* No Place for Rain; *A. J. McNicholl,* Physical Metaphysics; *Vincent Edward Smith,* Cognitive Aspects of the Heisenberg Principle.

FRANCISCAN STUDIES IX 3: *Valens Heynck,* A Controversy at the Council of Trent concerning the Doctrine of Duns Scotus; *Rudolf Harvey,* The

Primacy of Truth; *Beraud de Saint Maurice,* Existential Import in the Philosophy of Duns Scotus. 4: *John B. Morall,* Ockham's Political Philosophy; *Erich Hochstetter,* Nominalismus; *Paul Vignaux,* Note sur esse beatificabile; *Ernest A. Moody,* Ockham and Aegidius of Rome; *Philotheus Boehner,* A Recent Presentation of Ockham's Philosophy.

THE MODERN SCHOOLMAN XXVII 1: *Brian Coffey,* The Notion of Order according to St. Thomas Aquinas; *Martin J. Hillenbrand,* Dharma and Natural Law — A Comparative Study; *George P. Klubertanz,* Ethics and Theology; *Blaise Romeyer,* Maurice Blondel, The Dialectician of Universal Dynamism. 2: *George P. Klubertanz,* The Unity of Human Activity; *A. Robert Caponigri,* Philosophy and History; *Bernard J. F. Lonergan,* A Note on Geometrical Possibility; *Eli Karlin,* War and Work; *R. J. Henle,* Second Annual Meeting of the Missouri State Philosophy Association.

THE JOURNAL OF RELIGION XXIX 4: *Charles D. Kean,* The Task of Theology; *Paul Ramsey,* Elements of a Biblical Political Theory; *W. Barnett Blakesmore,* The Nature and Structure of the Practical Field.

THE REVIEW OF RELIGION XIV 1: *Ralph Marcus,* Job and God; *Hoxie N. Fairchild,* Browning's Heaven; *Harold Schulweis,* Crisis Theology and Martin Buber.

ANGLICAN THEOLOGICAL REVIEW XXXI 4: *W. Norman Pitenger,* The Theological Enterprise and the Life of the Church; *Massey H. Shepherd, Jr.,* The Prayer Book and the Bible; *A. Gabriel Hebert,* Authority and Freedom; *Oscar J. F. Seitz,* Criteria for the Esoteric Logia in Mark; *Louis A. Haselmayer,* Priesthood and Reunion; *J. Randolph Field,* Theology Looks at ESP; *J. Spencer Kennard, Jr.,* The Place of Origin of Matthew's Gospel.

THE HARVARD THEOLOGICAL REVIEW XLII 4: *A. J. Festugière,* A propos des arétalogies d'Isis; *Robert Stevenson,* Dr. Watts' "Flights of Fancy"; *Arild Christensen,* Kierkegaard's Secret Affliction; *Robert M. Grant,* "One Hundred Fifty-Three Large Fish" (John 21:11); *Herbert C. Youtie,* A Note on Edson's Macedonica III. 3: *Herbert Jennings Rose,* Mana in Greece and Rome; *Moses Hadas,* Aristeas and III Maccabees; *Harry Caplan* and *Henry H. King,* Latin Tractates on Preaching: A Book-list; *R. P. Casey,* Monastics and Seculars under Yaroslav the Wise.

SPECULUM XXIV 4: *Etienne Gilson,* Doctrinal History and Its Interpretation; *Stephen Kuttner,* The Scientific Investigation of Mediaeval Canon Law: The Need and the Opportunity; *B. Wilkinson,* The "Political Revolution" of the Thirteenth and Fourteenth Centuries in England; *Charles A. Knudson,* The Publication of Old French Texts: Some Comments and Suggestions; *E. J. McCorkell,* Humanism and the Middle Ages; *Francois L. Ganshof,* Charlemagne; *Edgar B. Frank,* Small Gothic Ironworks; *Arthur Hatto,* Walther von der Vogelweide's Ottonian Poems; A New Interpretation.

THE AUSTRALASIAN JOURNAL OF PHILOSOPHY XXVII 2: *A. Boyce Gibson,* Philosophers in Council; *T. A. Rose,* The Nominalist Error; *Benjamin Higgins,* Economics and Ethics.

BRITISH JOURNAL OF PSYCHOLOGY XL Part 1.

AMERICAN JOURNAL OF PSYCHOLOGY LXII 4.

PSYCHOLOGICAL REVIEW LVI 5, 6.

JOURNAL OF EXPERIMENTAL PSYCHOLOGY XXXIX 5.

PSYCHOLOGICAL BULLETIN XLVI 6.

JEWISH SOCIAL STUDIES XI 4: *Edmund Silberner,* Friedrich Engels and the Jews; *Benjamin Wolman,* The Social Development of Israeli Youth (concluded); *Philip Friedman,* Polish Jewish Historiography between the Two Wars (1918–1939).

THE MAHA BODHI LVII 8: *A. P. Sugatananda,* The Baruas of Akyab; *Francis Story,* Abhidhamma and Western Thought; *S. Sangharakshita,* Is Buddhim for Monks Only?; Van Narada Thera's Work in Europe. 9: *Laljiram Sukla,* The Secret of Thought-Power; *Anagarika P. Sugatananda,* Tanha (Craving); *A. R. Kulkarni,* The Buddha: The Great Thinker; 57th Annual General Meeting of the Maha Bodhi Society of India.

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